CIMAC CONGRESS 25

ZURICH, MAY 19 – 23, 2025

Congress program

The times and dates on which presentations or other program items take place are subject to change. We also reserve the right to make changes to the content of the program.

CIMAC congress program V2 (2025.04.04)

How to navigate this program

	Weichai	Lubrizol	Duap	R4
09:00 – 10:40	Ammonia applications (Session 8: New & alternative fuels)	New & basic research I (Session 16: Basic research & advanced engineering)	Turbochargers I (Session 15: Turbochargers)	Hybrid system integration or integratio at ship level (Session 2: System integration & hybrid)
11:20 – 13:00	Methanol applications (Session 8: New and alternative Fuels)	Lubricants for low carbon fuels (Session 9: Lubricants)	Mechanics, materials, coatings (Session 18: Mechanics, materials, coatings)	Pecha kucha I (Pecha kucha session)
14:00 – 15:40	Colin Trust Keynote			
16:40 – 18:20	Engine platform and industry perspective (Session 10: Dual fuel)	Fuel system development for futre fuels I (Session 13: Fuel injection)	Ring–liner interaction (Session 17: Tribology)	Combustion development for alternative fuels (Session 6: Emission reduction engine measures)

1. In the daily overview:

(Slide 3-6)

Press the link in the session name to see the presentations of the session

(Does not work on this explanatory slide)

2. In the session overview:

(Slide 7 following)

Press the link on the day to quickly and conveniently return to the daily overview

(Does not work on this explanatory slide)

ID	Abstract Title	Name	Company
25	Multi-scale digital twins & AI analytics for lifecycle insights and accelerated energy solutions	Robert Whittaker	Innio Jenbacher GmbH
131	MAN-ES: Navigating Connectivity, Cyber Security and AI at Sea	Casper Olesen	MAN Energy Solutions
195	Securing legacy automation components in UR-E27 Systems	Christopher Sundberg	Woodward, Inc.
200	A Study on Engine Fault Diagnosis and Maintenance Solutions Based on the BERT Pre-trained Model	Jin Guan	FAWDE
338	DIEM - A Digital Engine Management Platform for Performance Assessment and CBM for LNG Fleets	Panos Kyrtatos	Propulsion Analytics

Day: Monday
Time: 13:40 – 15:20

3. Browse by topic:

Or browse the sessions from slide 7 on sorted by topic

Day 1: Monday, 19.05.2025

	Weichai	Lubrizol	Duap	Peter Fuchs Technology
10:00 – 13:00	Opening Ceremony Keynote Speech: Prof. Lynn Loo (Global Centre for Maritime Decarbonisation) Keynote Speech: Carsten Rolle (World Energy Council)			
	Lunch break			
14:00 – 15:40	Future fuels properties / impacts (Session 8: New & alternative fuels)	Improving operations (Session 1: Digitalization)	Automation (Session 4: Controls, measurement, automation)	Power-Gen (Session 20: Operators' perspective)
	Poster Session Monday / Break			
16:20 – 18:00	Dual fuel low carbon fuels (Session 10: Dual fuel)	Combustions development I (Session 17: Simulation technologies)	Visualization: hydrogen (Session 19: Visualization)	Electrification and fuel cells I (Session 3: Electrification and fuel cells)
19:30	Welcome Reception @ the congress venue			

Day 2: Tuesday, 20.05.2025

	Weichai	Lubrizol	Duap	Peter Fuchs Technology
09:00 – 10:40	Ammonia applications (Session 8: New & alternative fuels)	New & basic research I (Session 16: Basic research & advanced engineering)	Turbochargers I (Session 15: Turbochargers)	Hybrid system integration or integration at ship level (Session 2: System integration & hybrid)
	Poster Session Tuesday Morning / Break			
11:20 – 13:00	Methanol applications (Session 8: New and alternative fuels)	Lubricants for low carbon fuels (Session 9: Lubricants)	Mechanics, materials, coatings (Session 18: Mechanics, materials, coatings)	Pecha Kucha I (Pecha Kucha session)
	Lunch Break			
14:00 – 15:40	Colin Trust keynote: „Strategic thinking on the four levels of AI” Prof. Stefan Michel, Professor of Management / Dean of Faculty and Research - IMD, Lausanne Panel discussion Peter Krähenbühl, Vice President Product Centre and former GM digital transformation (WinGD) | Amelie Desrochers, Research Associate (Cleantech) | Paolo Tonon, Technical Director (Berge Bulk) | Marco Coppo, Co-Chair Digitalization Strategy Group (CIMAC) | Moderation: Kathrin Lau, Editor in Chief (DVV / Ship & Offshore)			
	Poster Session Tuesday Afternoon / Break			
16:20 – 18:00	Engine platform and industry perspective (Session 10: Dual fuel)	Fuel system development for future fuels I (Session 13: Fuel injection)	Ring-liner interaction (Session 14: Tribology)	Combustion development for alternative fuels (Session 6: Emission reduction engine measures)

Day 3: Wednesday, 21.05.2025

	Weichai	Lubrizol	Duap	Peter Fuchs Technology
09:00 – 10:40	Biofuels / alternative liquid fuels I (Session 8: New and alternative fuels)	Engine measures and emission measurements (Session 6: Emission reduction technologies engine measures)	Retrofits (Session 12: Retrofit solutions)	Hybrid technologies (Session 2: System integration & hybridization)
	Poster Session Wednesday Morning / Break			
11:20 – 13:00	Monitoring component condition (Session 1: Digitalization)	Exhaust aftertreatment (Session 5: Exhaust Gas Aftertreatment Solutions & CCS)	New & basic research II (Session 16: Basic research and advanced engineering)	Electrification and fuel cells development II (Session 3: Electrification and fuel cells)
	Lunch Break			
14:00 – 15:40	Panel discussion: Decarbonizing Marine Across the Value Chain Peter Schild, Managing Director Sustainability (Proman) | Eman Abdalla, Global Operations & Supply Chain Director (Cargill) | Alexandra Ebbinghaus, GM Decarbonisation (Shell) | Giuseppe Gargiulo, Head of New Newbuilding (MSC) | Shingo Mizutani Executive Officer of NYK Line & CEO of NYK Shipmanagement Pte. Ltd (NYK) | Moderation: Kathrin Lau, Editor in Chief (DVV / Ship & Offshore)			
	Poster Session Wednesday Afternoon / Break			
16:20 – 18:00	Future fuel concepts (Session 8: New and alternative fuels)	Combustion development II (Session 17: Simulation technologies)	New engine concepts and systems - ammonia (Session 11: New engine concepts & systems)	Controls (Session 4: Controls, measurement, automation)

Day 4: Thursday, 22.05.2025

	Weichai	Lubrizol	Duap	Peter Fuchs Technology
09:00 – 10:40	Hydrogen applications (Session 8: New and alternative fuels)	New engine concepts & systems – methanol and hydrogen (Session 11: New engine concepts & systems)	Fuel system development analysis (Session 13: Fuel injection)	NH3 aftertreatment (Session 5: Exhaust gas aftertreatment solutions & CCS)
	Poster Session Thursday / Break			
11:20 – 13:00	Ammonia (Session 19: Visualization)	Safety aspects of new and alternative fuels (Session 20: Operators' perspective)	Turbochargers II (Session 15: Turbochargers)	Fuel system development for future fuels II (Session 13: Fuel Injection)
	Lunch Break			
14:00 – 15:40	Biofuels / liquid alternative fuels II (Session 8: New and alternative fuels)	Conventional lubricants and low carbon lubricants (Session 9: Lubricants)	Monitoring (Session 4: Controls, measurement, automation)	Pecha Kucha II (Pecha Kucha session)
	Break			
16:20 – 18:00	Monitoring and operation (Session 14: Tribology)	Conventional fuels (Session 10: Dual fuel)	CCS and new technology (Session 5: exhaust gas aftertreatment solutions & CCS)	Components optimization (Session 17: Simulation technologies)
19:00	Gala Dinner @ Albisgütli			

Topic 1: Digitalization, connectivity, artificial intelligence & cyber security

Session Name: Improving operations

Session Organizer:
Marco Coppo (OMT)
Konstantin Kiesling (LEC)

ID	Abstract Title	Name	Company
25	Multi-scale digital twins & AI analytics for lifecycle insights and accelerated energy solutions	Robert Whittaker	Innio Jenbacher
131	MAN ES: Navigating connectivity, cyber security and AI at sea	Casper Olesen	MAN Energy Solutions
338	DIEM - A digital engine management platform for performance assessment and CBM for LNG fleets	Panos Kyrtatos	Propulsion Analytics
334	Leveraging digitalization in HiMSEN production plant: implementation of NEMOS for emission compliance	Seohyun Jang	Hyundai Heavy Industries

Day: **Monday**
Time: **13:40 – 15:40**

Topic 1: Digitalization, connectivity, artificial intelligence & cyber security

Session Name: Monitoring component condition

Session Organizer:
Marco Coppo (OMT)
Konstantin Kiesling (LEC)

ID	Abstract Title	Name	Company
58	Advanced digital methods for condition monitoring of bearing systems for large bore ICEs	Gunther Hager	Miba Gleitlager Austria
122	AI-supported surface topography characterization of cylinder liners in large ICEs	Christian Laubichler	LEC
266	Virtual model for continuous turbocharger optimization and monitoring	Matthias Roosz	AVAT Automation
297	Digitalization in filtration – how data-driven maintenance can help to protect your assets	Andreas Schilbert	Boll & Kirch Filterbau

Day: **Wednesday**
Time: **11:20 – 13:00**

Topic 2: System Integration & hybridization

Session Name: Hybrid system integration or integration at ship level

Session Organizer:
Elias Boletis (Enarate Marine)
Hinrich Mohr (Gaskraft Engineering)

ID	Abstract Title	Name	Company
140	Design and optimized control of hybrid propulsion systems based on a modular simulation kit	Torsten Dunger	ITK-Engineering
272	CO_2 reduction benefits through engine room hybridization by applying ECMS algorithm	Apostolos Karvountzis-Kontakiotis	WinGD
333	DG optimization for CO_2 reduction in microgrids with increased RES penetration: a simulation study	Issam Matragi	Centrale Nantes
348	Development and real ship application of intelligent multi-mode switching control device	Chen Defu	Shanghai Marine Diesel Engine Research Institute
502	Preliminary implementation of a FC-ICE system for power and propulsion of a 14000 TEU containership	Peter de Vos	Delft University of Technology

Day: **Tuesday**
Time: **09:00 – 10:40**

Topic 2: System integration & hybridization

Session Name: Hybrid technologies

Session Organizer:
Elias Boletis (Enarate Marine)
Hinrich Mohr (Gaskraft Engineering)

ID	Abstract Title	Name	Company
77	Superior application solutions and key technical points for ship shaft generator system	Zhangchao Liu	Tongji University
130	Dynamic performance of a high-pressure direct injection methanol-fuelled engine	Benny Mestemaker	Royal IHC
211	Application of Kawasaki green gas engine L30KG for hybrid propulsion system	Nobuhiko Kii	Kawasaki Heavy Industries
284	Use case: Estimation and optimization of a hybrid ship power system in early design stage	Oliver Klein	Hamburg University of Technology

Day: **Wednesday**
Time: **09:00 – 10:40**

Topic 3: Electrification and fuel cells development

Session Name: Electrification and fuel cells development I

Session Organizer:
Mathias Moser (MAN ES)
Günter Figer (AVL List)

ID	Abstract Title	Name	Company
109	Advanced balance of plant solutions for high-power, high-efficiency and reliable fuel cell systems	Peter Fledersbacher	Woodward
179	Hydrogen retrofit of a RoRo-ferry – the holistic approach	Jorim Rosenberg	H2 Energy
264	PEM fuel cell systems for marine propulsion	Anton Reiter	AVL List
417	A predictive energy management for hybrid ship propulsion system considering battery capacity decay	Chen Chen	Harbin Engineering University
83	Integration of a hybrid hydrogen fuel cell-battery propulsion system into a modular rail vehicle	Stefan Bernsdorf	Stadler Rail Management AG

Day: **Monday**
Time: **16:20 – 18:00**

Topic 3: Electrification and fuel cells development

Session Name: Electrification and fuel cells development II

Session Organizer:
Mathias Moser (MAN ES)
Günter Figer (AVL List)

ID	Abstract Title	Name	Company
233	Development of the 200kW marine PEMFC system for SMVs	Youngtak Cho	Hyundai Heavy Industries
474	Holistic Integration of battery hybrid systems in merchant vessels: Evaluation of real-life data	Alessandro Zanelli	WinGD
158	Battery-electric propulsion for ocean-going cargo ships – design, operations and techno-economics	Jan Seidl-Zelenka	Nordem
64	A holistic approach to Solid Oxide technology through optimization of its supporting components.	Andrew Scullard	Johnson Matthey
480	Fuel cell retrofits - safety and practical challenges	Thomas Bayer	Lloyd's Register

Day: **Wednesday**
Time: **11:20 – 13:00**

Topic 4: Controls, automation, measurement, monitoring & predictive maintenance

Session Name: Controls

Session Organizer:
Yi Han (Woodward)
Rom Rabe (University of Wismar)

ID	Abstract Title	Name	Company
27	MBD based development platform for large bore midium speed engines	Masashi Kuwata	Daihatsu Diesel
88	Research on engine cylinder pressure identification method based on multi-signal fusion	Renqi Zhang	Wuhan University of Technology
110	Assessment and status of gaseous fuel rating using the methane number	Daniel B. Olsen	Colorado State University
471	Change point detection method for estimating the remaining useful lifetime of engine filters	Jean-Pierre Noot	Liebherr Components Colmar
476	A device for accurate dynamic air flow control in a hydrogen internal combustion engine	Georgios Bikas	University of Nürnberg

Day: **Wednesday**
Time: **16:20 – 18:00**

Topic 4: Controls, automation, measurement, monitoring & predictive maintenance

Session Name: Automation

Session Organizer:
Yi Han (Woodward)
Rom Rabe (University of Wismar)

ID	Abstract Title	Name	Company
17	Exploring digital ecosystems: Field insights from a powertrain monitoring perspective	Andreas Thalhammer	Geislinger
194	AFR3 fuel system by INNIO's Waukesha Engine	Bryan Hermsen	INNIO Waukesha Engine
201	Advanced actuation technology for cyber secure P2X engines	John Karspeck	Woodward Inc.
230	Maneuvering control technology for a ship with twin azimuth thrusters	Hidetaka Sato	IHI Power Systems
287	A methodology for data-driven diagnosis of marine two-stroke dual-fuel engines	Ioannis Sklias	WinGD

Day: **Monday**
Time: **13:40 – 15:20**

Topic 4: Controls, automation, measurement, monitoring & predictive maintenance

Session Name: Monitoring

Session Organizer:
Yi Han (Woodward)
Rom Rabe (University of Wismar)

ID	Abstract Title	Name	Company
98	Challenges of measuring raw exhaust of ammonia engines	Philipp Jakubec	IAG Test Cell Technology
176	On the development of novel telemetry systems for online monitoring of highly stressed components an	Bernhard Rossegger	LEC
224	Alarm management in the maritime industry. A field investigation into the watchkeepers' experiences	Asger Schliemann-Haug	Lloyd's Register
411	Integrating physics-based models and ML for condition monitoring of large bore medium speed engines	Rik De Graeve	Anglo Belgian Corporation
440	Fuel slip monitoring in high-humidity flue gases from co-firing of ammonia with methane	Liuhao Ma	Wuhan University of Technology

Day: **Thursday**
Time: **14:00 – 15:40**

Topic 5: Exhaust gas aftertreatment solutions & CCS

Session Name: NH_3 engine aftertreatment

Session Organizer:
Daniel Peitz (Hug Engineering)
Kati Lehtoranta (VTT Technical Research Center of Finland)

ID	Abstract Title	Name	Company
30	Practical application study of exhaust gas aftertreatment system for ammonia diesel dual fuel engine	Yuki Shimizu	Daihatsu Diesel
172	Exhaust gas treatment concept with coordinated combustion process management for NH_3-diesel engines	Felix Wenig	University of Rostock
235	Emmisions countermeasures for low-speed 2-stroke marine ammonia engines	Takaaki Makino	Mitsui E&S
255	Development of after-treatment system for ammonia fueled engine	Taehwan Kim	Hyundai Heavy Industries
465	Exhaust after-treatment concepts for 2-stroke NH_3 engines	Georgia Voniati	Aristotle University of Thessaloniki

Day: **Thursday**
Time: **09:00 – 10:40**

Topic 5: Exhaust gas aftertreatment solutions & CCS

Session Name: Exhaust aftertreatment

Session Organizer:
Daniel Peitz (Hug Engineering)
Kati Lehtoranta (VTT Technical Research Center of Finland)

ID	Abstract Title	Name	Company
34	Operational insights into marine selective catalytic reactors (SCRs)	Fabian Kock	DNV
74	From lab to machinery space: Advances in methane slip catalyst technology & engine internal measures	Hans-Philipp Walther	MAN Energy Solutions
138	Ash generation options for accelerated testing of marine diesel particulate filters	Päivi Aakko-Saksa	VTT Technical Research Centre of Finland
505	Ultra-low emission vessel field experience	Koen Christianen	Anglo Belgian Corporation
508	Methanol combustion engine exhaust gas aftertreatment	Daniel Peitz	Hug Engineering

Day: **Wednesday**
Time: **11:20 – 13:00**

Topic 5: Exhaust gas aftertreatment and CCS

Session Name: CCS and new technology

Session Organizer:
Daniel Peitz (Hug Engineering)
Kati Lehtoranta (VTT Technical Research Center of Finland)

ID	Abstract Title	Name	Company
183	A techno-economic evaluation of decarbonization concepts for the shipping sector	Christoph Redtenbacher	LEC
251	Application of MHI CO_2 capture technology for exhaust gas from internal combustion engine	Takashi Kamijo	Mitsubishi Heavy Industries
700	CIMAC WG5 White Paper: CCUS – Carbon Capture, Utilisation and Storage	Daniel Peitz	CIMAC e.V.

Day: **Thursday**
Time: **16:20 – 18:00**

Topic 6: Emission reduction technologies - engine measures and combustion development

Session Name: Engine measures and emission measurements

Session Organizer:
Christer Wik (Wärtsilä)
Koji Takasaki (Kyushu University)

ID	Abstract Title	Name	Company
171	Wärtsilä active NOx control development for lean burn engine	Gilles Monnet	Wärtsilä
330	Advancing sustainable shipping: Strategies for methane slip reduction in Wärtsilä 4-stroke engines	Diego Delneri	Wärtsilä
225	Methane Slip Reduction Technology from LNG Fueled Engine by Catalyst and Engine Modification	Kazuteru Toshinaga	Yanmar Power Technology
193	Increasing Low-Load Exhaust Temperatures To Aftertreatment Suitable Levels on a Two-Stroke EMD 645	Christopher Stoos	Southwest Research Institute

Day: **Wednesday**
Time: **09:00 – 10:40**

Topic 6: Emission reduction technologies - engine measures & combustion development

Session Name: Combustion development for alternative fuels

Session Organizer:
Christer Wik (Wärtsilä)
Koji Takasaki (Kyushu University)

ID	Abstract Title	Name	Company
85	GHG and methane slip reduction: The role of hydrogen blending into natural gas.	Stefania Ischia	Wärtsilä
102	Investigation of port fuel injected methanol and its aftertreatment concepts	Martin Axelsson	Wärtsilä
125	A large-scale development of GHG reduction technology by ammonia fueled and hydrogen fueled engines	Takahiro Nagashima	Japan Engine Corporation
292	Design and demonstration of a NH_3-fueled two-stroke uniflow engine for greenhouse gas reduction	Joshua Marion	Dumarey USA
7	Combustion development of an ammonia diesel dual-fuel medium speed marine engine	Hongmei Li	Shanghai Jiao Tong University

Day: **Tuesday**
Time: **16:20 – 18:00**

Topic 7: Pecha kucha

Session Name: Pecha kucha I

ID	Abstract Title	Name	Company
26	The solubility of ammonia in various fluids at different temperatures	Pourya Parsaeian	British Petrolium
29	New engine development - 16V180 from Isotta Fraschini Motori	Francesco Iannone	Isotta Fraschini Motori
163	A general-purpose digital twin for modern LNG carrier propulsion arrangements	George Dimopoulos	National Technical University of Athens
184	A value chain approach to decarbonizing the marine Industry	Paul Nai	Lubrizol
187	Hydraulically actuated hydrogen DI-injector	Alexandre Hild	Ganser CRS
249	Servo green edge - A high-performance stationary gas engine oil from IndianOil	Yogesh Kumar Sharma	IndianOil Corporation
361	Accelerating GHG reductions by changing your fuel, not your engine	Philip Hill	Quadrise
507	Hydrogen combustion engine exhaust gas aftertreatment	Daniel Peitz	Hug Engineering

Day: **Tuesday**
Time: **11:20 – 13:00**

Topic 7: Pecha kucha

Session Name: Pecha kucha II

ID	Abstract Title	Name	Company
20	Is GHG emissions direct measurement a dilemma?	MAX WU	Lloyd's Register
48	Optimizing crankcase ventilation for alternative fuels: Addressing blow-by dilution and filtration	Niclas Nowak	UT99
155	Advanced hybrid propulsion control system: Development, validation, and future	Seungwan Nam	HD Hyundai Heavy Industries
173	Measuring methane emissions from LNG engine utilizing different devices	Kati Lehtoranta	VTT Technical Research Centre of Finland
192	Modular automation (software and hardware) platform for P2X engine architectures	Yi Han	Woodward
467	Innovative oil mist separation for crankcase ventilation of ICE as a revised state of the art	Ulrich Luger	IFT
268	Multimodal analysis of biodiesel blended VLSFO for marine application: Techno-economic perspectives	Deva Dinesh	Hindustan Petroleum Corporation
515	Innovative Additive Solutions for Sustainable Fuels: Evolution and Impact	James Dodd	Infineum
186	Development and application of a flex-fuel single cylinder platform for high-speed engines	Francesco Accurso	Dumarey Automotive Italia S.p.A.

Day: **Thursday**

Time: **14:00 – 15:40**

Topic 8: New and alternative fuels

Session Name: Future fuel properties / impacts

Session Organizer:
German Weisser (WinGD)
Andreas Wimmer (Graz University of Technology)

ID	Abstract Title	Name	Company
14	Digital Fuel Twin - a simple and consistent solution to foster drop-In and alternative fuels	Jens Olaf Stein	Robert Bosch
89	Overcoming the technical barriers of methanol fuel using additives	Frank Simpson	Infineum
238	Stability assessment of bio-residual marine fuels (RF grades) through extended TSP and spin testing	Muhammad Usman	Lloyd‘s Register
308	Exploration of novel combustion strategy for alternative fuel using computational fluid dynamics	James Wood	Woodward
424	Evaluation of corrosion properties and oxidation stability of biodiesel blends	Sara Rezaee	Viswa Group

Day: **Monday**
Time: **13:40 – 15:40**

Topic 8: New and alternative fuels

Session Name: Biofuels / alternative liquid fuels I

Session Organizer:
Bartosz Rozmyslowicz (WinGD)
Charlotte Rojgaard (Bureau Veritas)

ID	Abstract Title	Name	Company
21	Qualification of pyrolysis oil from cashew nut shell press cake as marine biofuel	Jan Seidl-Zelenka	Norden
167	Cashew nutshell liquid as a biofuel: Use of additives to improve engine operability	Amy Bates	Infineum
489	Study on the performance, emission and combustion characteristics of low-speed engine	Wu Gang	Shanghai Maritime University
513	Biodiesel blends with VLSFO - Brazil´s field tests in vessels	Antonio Fernandez Prada	Petrobras - Petróleo Brasileiro

Day: **Wednesday**
Time: **09:00 – 10:40**

Topic 8: New and alternative fuels

Session Name: Biofuels / liquid alternative fuels II

Session Organizer:
Charlotte Rojgaard (Bureau Veritas)
Bartosz Rozmyslowicz (WinGD)

ID	Abstract Title	Name	Company
70	The investigation on the application of dimethyl-ether based green synthetic fuel to Marine power	Teng Liu	China Shipbuilding Power Engineering Institute Co., Ltd.
80	Ethanol: A viable alternative fuel option	Juho Repo	Wärtsilä
227	Exhaust emissions on a 4-stroke engine from bio residual fuel containing tire pyrolysis oil and FAME	Barbara Heyberger	TotalEnergies
416	Stability of bio-blended residual marine fuel oil	Floris Lauwers	Bureau Veritas
499	Blending behaviour of pure, esterified and hydrotreated pyrolysis oils	Fanny Langschwager	University of Rostock

Day: **Thursday**
Time: **16:20 – 18:00**

Topic 8: New and alternative fuels

Session Name: Hydrogen applications

Session Organizer:
Andreas Wimmer (Graz University of Technology)
Christoph Kendlbacher (Robert Bosch)

ID	Abstract Title	Name	Company
97	Hydrogen based ship propulsion, first ever large two-stroke engine tests with hydrogen.	Johan Sjöholm	MAN Energy Solutions
144	Effects of hydrogen co-firing on the performance of Mitsubishi KU30GSI gas engine	Junnosuke Ando	Mitsubishi Heavy Industries
151	Analysis on combustion and emission of hydrogen-LNG blends in a medium-speed LNG dual-fuel engine	Hyunwoo Song	HD Korea Shipbuilding & Offshore Engineering
208	Kawasaki's gas engines powered by hydrogen for stationary generation	Akihito Aota	Kawasaki Heavy Industries
305	Preliminary investigation of the Wabtec NextFuel engine for hydrogen/diesel dual fuel operation	Adam Klingbeil	Wabtec Corporation

Day: **Thursday**
Time: **09:00 – 10:40**

Topic 8: New and alternative fuels

Session Name: Ammonia applications

Session Organizer:
Kangki Lee (Zoellner Marine)
German Weisser (WinGD)

ID	Abstract Title	Name	Company
82	High efficiency ammonia combustion in the MAN B&W LGI-A marine two-stroke engine	Johan Hult	MAN Energy Solutions
191	Efficiency and emissions of ammonia-diesel dual-fuel combustion in a high-speed 4-stroke engine	Brian Kaul	Oak Ridge National Laboratory
214	Development of ammonia fueled engine (28ADF) for future marine industries	Yutaka Masuda	IHI Power Systems
421	Power generation using ammonia as a single fuel in internal combustion engines	Clément Leroux	Innio Jenbacher
455	The steady-state and transient performance of an ammonia-diesel dual fuel multi-cylinder engine	Longfei Deng	Tianjin University

Day: **Tuesday**
Time: **09:00 – 10:40**

Topic 8: New and alternative fuels

Session Name: Methanol applications

Session Organizer:
Christoph Kendlbacher (Robert Bosch)
Fabian Kock (DNV)

ID	Abstract Title	Name	Company
16	Experimental study on improvement of ignitability of methanol fuel	Katsuyoshi Asaka	Daihatsu Diesel
37	Effects of biodiesel pilot ignition in dual-fuel methanol combustion	Brian Kaul	Oak Ridge National Laboratory
170	E-methanol for shipping: Quality considerations for reduced environmental impact	Päivi Aakko-Saksa	VTT Technical Research Centre of Finland
108	Experimental investigations of a methanol dual-fuel combustion process for marine engines	Karsten Stenzel	WTZ Roßlau

Day: **Tuesday**
Time: **11:20 – 13:00**

Topic 8: New and alternative fuels

Session Name: Future fuel concepts

Session Organizer:
Fabian Kock (DNV)
Kangki Lee (Zoellner Marine)

ID	Abstract Title	Name	Company
234	High reactivity fuel ignition pre-chamber: Stable and rapid combustion for ammonia marine engine	Jinze Li, Zhuohang Li	Shanghai Jiao Tong University
341	Ammonia-based powertrain with onboard generation of hydrogen for small ICEs	Benjamin Stengel	FVTR
396	Gane fuel and Infineum additives – a single fuel methanol solution	Greg Morris	Gane Energy & Resource Pty
446	Ammonia: Energy carrier only or well-suited sustainable fuel for large engine applications?	Marcel Lackner	LEC

Day: **Wednesday**
Time: **16:20 – 18:00**

Topic 9: Lubricants

Session Name: Lubricants for low carbon fuels

Session Organizer:
Sadao Nakayama (IHI Power Systems)
Stefan Schmitz (Boll und Kirch)

ID	Abstract Title	Name	Company
1	Lubricants enabling alternative fuels for maritime decarbonization	Paul Elliot	Gulf Marine
510	Field experience with Shell Alexia 40 XC in dual fuel 2-stroke engines combusting alternative fuels.	Luis Garcia	Shell Global Solutions (Deutschland)
107	Achieving the right viscosity for marine lubricants in a sustainable future	Shenghua Li	Chevron Oronite Company LLC
222	Engine Oil Formulations with Improved Cleanliness for New-Generation Two-Stroke Marine Engines	Bijan Roy	Indian Oil Corporation Limited

Day: **Tuesday**
Time: **11:20 – 13:00**

Topic 9: Lubricants

Session Name: Conventional lubricants and low carbon lubricants

Session Organizer:
Stefan Schmitz (Boll und Kirch)
Sadao Nakayama (IHI Power Systems)

ID	Abstract Title	Name	Company
293	Emerging fuel impact on engine lubrication and lubricating oil condition in marine low speed and med	Luc Verbeeke	Chevron Belgium
514	Medium speed engine oils optimized for ultra low emission profiles	Daniel Peitz	Hug Engineering
280	Reducing CO_2 impact through fuel economy: Developing a 2-stroke FE system oil – results, next steps	Catherine Amblard	TotalEnergies
478	Assessment & Comparison of Dispersancy Properties in Fresh Lube Oils	Ganesh Natarajan	The Viswa Group
511	Development of an Advanced Lubricant for Modern Gas Engines and Field Performance Confirmation	Luis Garcia	Shell Global Solutions (Deutschland) GmbH

Day: **Thursday**
Time: **14:00 – 15:40**

Topic 10: Dual fuel

Session Name: Dual fuel 1: Low-carbon fuels

Session Organizer:
Adam Klingbeil (Wabtec Corporation)
Kaj Portin (Wärtsilä)

ID	Abstract Title	Name	Company
127	The optimization of the structure of piston for ammonia-diesel dual-fuel engine under heavy load	Yanling He	Tianjin University
203	Methanol port fuel injection technology study on CPGC M320 engine	Yuehua Qian	China Shipbuilding Power Engineering Institute
418	Genetic algorithm-assisted performance prediction of an MW-scale ammonia-diesel dual-fuel engine	Yan Zhang	University of Birmingham
	Reorganization of the room for the welcome reception from 17:20 on		

Day: **Monday**
Time: **16:20 – 18:00**

Topic 10: Dual fuel

Session Name: Dual fuel 2: Engine platform and industry perspective

Session Organizer:
Sebastian Hensel (WinGD)
Adam Klingbeil (Wabtec Corporation)

ID	Abstract Title	Name	Company
367	Innovative HiMSEN methanol engine development with virtual product development(VPD) technology	Gwanghyeon Yu	Hyundai Heavy Industries
120	The latest technologies of J-ENG UE engine	Jun Yanagi	Japan Engine Corporation
381	Development of 4-stroke medium speed methanol/diesel-fueled engine for marine application in YANMAR	Daisuke Morimitsu	Yanmar Power Technology
470	X-DF-M - WinGD‘s new methanol engine	Andrea Pastore	WinGD
8	Methanol Dual Fuel Engine Development Status	Yoshinori Kaji	Daihatsu Diesel MFG.CO.,LTD.

Day: **Tuesday**
Time: **16:20 – 18:00**

Topic 10: Dual fuel

Session Name: Dual-fuel 3: Conventional fuels

Session Organizer:
Kaj Portin (Wärtsilä)
Sebastian Hensel (WinGD)

ID	Abstract Title	Name	Company
105	Lowest GHG emissions on medium speed engines by higher epsilon and H_2-admission to the fuel gas	Manuel Glauner	University of Rostock, Chair of Piston Machinery and Internal Combustion Engines
311	Using multi-stage Wiebe to characterize the combustion of a converted marine NG SI engine	Konstantinos Kiouranakis	Delft University of Technology
384	Investigation on the effects of water blending on spray and combustion characteristics of methanol	Tianlong Lu	Tianjin University
487	Methane slip measurement and mitigation: A multi-vessel case study and lessons learned	Patrick Kirchen	University of British Columbia
68	Direct comparison of hydrogen-diesel and methanol-diesel dual direct injection engine combustion	Shawn Kook	The University of New South Wales

Day: **Thursday**
Time: **16:20 – 18:00**

Topic 11: New engine concepts & systems

Session Name: New engine concepts & systems I

Session Organizer:
Matthias Auer (MAN ES)
Sadeo Nakayama (IHI Power Systems)

ID	Abstract Title	Name	Company
528	Ammonia-powered future: Introducing Wärtsilä 25	Tobias Krook	Wärtsilä
90	Ammonia combustion technology for single fueled spark ignition engine	Kenta Miyauchi	IHI Corporation
135	Auxiliary systems and safety concepts for two-stroke ammonia burning engines	Arrigo Battistelli	MAN Energy Solutions
329	WinGD's ammonia engine technology for the new X-DF-A family	Barbara Graziano	WinGD
450	Ammonia cracking: enabler for ammonia engines in power generation applications	Nicole Wermuth	Graz University of Technology

Day: **Wednesday**
Time: **16:20 – 18:00**

Topic 11: New engine concepts & systems

Session Name: New engine concepts & systems II

Session Organizer:
Matthias Auer (MAN ES)
Sadeo Nakayama (IHI Power Systems)

ID	Abstract Title	Name	Company
190	Next-generation ship development in Japan	Chiharu Kawakita	New Energy and Industrial Technology Development Organization
217	Development of marine hydrogen fuel system (MHFS)	Takashi Izumi	Kawasaki Heavy Industries
232	Deduction of a customer-oriented methanol four-stroke engine portfolio	Maximilian Bartholy	MAN Energy Solutions
254	Adaptability and efficiency analysis of hybrid electric propulsion systems for ocean going vessels	Diego Pauluzzi	Wärtsilä
517	SCE920 - Key enabler for the roll-out of validated new technologies to largest engine sizes	Marc Spahni	WinGD

Day: **Thursday**
Time: **09:00 – 10:40**

Topic 12: Retrofit solutions

Session Name: Retrofits

Session Organizer:
Stephan Laiminger (Innio Jenbacher)
Patrick Frigge (Makeen Saudi Engines Manufacturing)

ID	Abstract Title	Name	Company
181	New retrofit solutions for MAN B&W marine two-stroke engines	Dorthe Marie Sveistrup Jacobsen	MAN Energy Solutions
261	Methanol upgrade solution for the existing M 32 & M 43 platforms	Michael Sturm	Caterpillar Motoren
279	Assessment of methanol and hydrogen combustion in large engines	Shinsuke Murakami	AVL List
288	Innovating maritime sustainability: Designing a fuel-flexible vessel and engine	Sangram Nanda	Wärtsilä
362	A pathway to develop a methanol combustion concept for retrofit propulsion applications	Maximilian Malin	LEC

Day: **Wednesday**
Time: **09:00 – 10:40**

Topic 13: Fuel injection & gas admission and engine components

Session Name: Fuel system development for future fuels I

Session Organizer:
Daniel Bosshard (Woodward)
Masayoshi Kawakami (JICEF)

ID	Abstract Title	Name	Company
15	Premixed combustion of alternative fuels as a fast and economic path to decarbonize	Jens Olaf Stein	Robert Bosch
236	Application & experience of a pilot-controlled DI gas & hydrogen injector on marine engine	Erich Vogt	DUAP
253	Further development of a methanol port fuel injection platform for medium-speed engines	Peter Gaiser	Heinzmann GmbH & Co. KG
258	Design, modelling and performance of an OMT methanol port fuel injector for large marine engines	Marco Ferro	OMT - Officine Meccaniche Torino
527	Manufacturing of Stainless Components for Alternative Fuel Systems Applications	Alkan Göcmen	Peter Fuchs Technology AG

Day: **Tuesday**
Time: **16:20 – 18:00**

Topic 13: Fuel injection & gas admission and engine components

Session Name: Fuel system development for future fuels II

Session Organizer:
Daniel Bosshard (Woodward)
Masayoshi Kawakami (JICEF)

ID	Abstract Title	Name	Company
165	Development of the twin-circuit-injector for liquid and gaseous alternative fuels	Tomohiro ASAI	NICO Precision
188	An integrated CFD-FEM analysis on heat load of LGI-M fuel injectors	Kar Mun Pang	MAN Energy Solutions
257	Tailormade solutions for high pressure direct injection of methanol and ammonia	Claudio Negri	OMT - Officine Meccaniche Torino SpA
325	A new future fuel injection system for CPGC 4-stroke engine family in the 32 to 45 cm bore segment	Li Yang	Shanghai Jiao Tong University & China Shipbuilding Power Engineering Institute
354	System architectures for HPDF injection of PTX-fuels on large marine engines	Michael Willmann	Woodward L'Orange

Day: **Thursday**
Time: **11:20 – 13:00**

Topic 13: Fuel injection & gas admission and engine components

Session Name: Fuel system development analysis

Session Organizer:
Daniel Bosshard (Woodward)
Masayoshi Kawakami (JICEF)

ID	Abstract Title	Name	Company
139	Development and prospect of ‘Stratified injection system’	Koji Takasaki	Kyushu Univ. National Maritime Research Institute, Japan
174	Experimental characterization of an MPDI gas injector for four-stroke applications	Sebastian Cepelak	University of Rostock
449	Machine learning-assisted spray pattern identification and prediction for liquid ammonia fuel	Dawei Wu	University of Birmingham
526	Optimizing ammonia-hydrogen combustion for high-performance marine engines: Insights from experimental and CFD investigations	Arne Güdden	FEV

Day: **Thursday**
Time: **09:00 – 10:40**

Topic 14: Tribology

Session Name: Ring-liner interaction

Session Organizer:
Franz Koch (FEV)
Jörgen Marken (MAN ES)

ID	Abstract Title	Name	Company
10	Superior reliability piston rings made of alloy steel with PVD coating	Minoru Kawanishi	RIKEN Corporation
22	Ammonia fuel engines: The change of tribological behavior for the cylinder liner – piston ring	Xing Xu	Harbin Engineering University
71	A multi-scale fourier feature network for efficient lubrication analysis of engine rough surfaces	Yihu Tang	SMDERI
134	Evaluating plain bearing performance in alternative fuel engine applications	Sebastian Kirchhamer	Miba Gleitlager Austria
464	Progressive evolving of a high-performance PCU design: From natural gas to hydrogen applications	Frank Berbig	Rolls-Royce Power Systems

Day: **Tuesday**
Time: **16:20 – 18:00**

Topic 14: Tribology

Session Name: Monitoring and operation

Session Organizer:
Franz Koch (FEV)
Jörgen Marken (MAN ES)

ID	Abstract Title	Name	Company
274	Cost-efficient piston ring design for WinGD engines achieved with advanced development methods	Markus Weber	WinGD
431	Follow-up report on a new real-time condition monitoring method for engine bearings	Motohiko Koshima	Daido Metal
2	New monitoring system for direct operating surveillance of con-rod bearings	Leander Marquardt	University of Stralsund
443	Life and Reliability Analysis of Marine Engine Piston Ring Based on Tribo-dynamic Model	Lining Gao	Shanghai Jiao Tong University

Day: **Thursday**
Time: **14:00 – 15:40**

Topic 15: Turbochargers & air / exhaust management

Session Name: Turbochargers I

Session Organizer:
Silvio Risse (KBB Turbo)
Dino Imhof (HUG Engineering)

ID	Abstract Title	Name	Company
3	Development of e-compressor system to improve high-speed engine transient load acceptance	Keith Douglas	Bowman eTurbo Systems
63	The impact of alternative fuels on the requirements for future turbocharger generations	Thomas Pitschel	Kompressorenbau Bannewitz
444	Optimized design of centrifugal compressor splitter blades in marine turbocharger	Yao Song	Harbin Engineering University
503	Sequential turbocharging as performance enabler for demanding marine propulsion engines	Cyril Bessonnard	Accelleron Industries

Day: **Tuesday**
Time: **09:00 – 10:40**

Topic 15: Turbochargers & air / exhaust management

Session Name: Turbochargers II

Session Organizer:
Silvio Risse (KBB Turbo)
Dino Imhof (HUG Engineering)

ID	Abstract Title	Name	Company
91	New Technology of MET Turbocharger toward Decarbonization	Taiyo Shirakawa	Mitsubishi Heavy Industries Marine Machinery & Equipment
259	Actuator platform for driving various functions in air/exhaust path of internal combustion engines	Sören Wiskandt	Heinzmann GmbH & Co. KG
363	ACCX300-L axial turbocharger series development update	Simon Ma	Accelleron Industries
493	Upgrading the MAN 32/40 engine with the new TCF20 turbocharger	Martin Kern	MAN Energy Solutions

Day: **Thursday**
Time: **11:20 – 13:00**

Topic 16: Basic research & advanced engineering - new concepts

Session Name: New & basic research I

Session Organizer:
Bert Buchholz (University of Rostock)
Michael Engelmayer (LEC)

ID	Abstract Title	Name	Company
57	Sensitivity of in-cylinder pressure measurement and analysis to ammonia and hydrogen fuel blends	David Rogers	Kistler Instrumente
114	Towards conceptual understanding of pre-ignition mechanisms in hydrogen-fueled engines	Ales Srna	Sandia National Laboratories
205	Partial cracking ammonia for marine engine applications: From mechanism to numerical investigation	Yuan Fang	Dalian University of Technology
244	Ammonia as carbon-free fuel for maritime applications – combustion investigations and safety aspects	Matthias Auer	MAN Energy Solutions
509	Ammonia combustion engine exhaust gas aftertreatment	Enno Esser	Hug Engineering

Day: **Tuesday**
Time: **09:00 – 10:40**

Topic 16: Basic research & advanced engineering - new concepts

Session Name: New & basic research II

Session Organizer:
Bert Buchholz (University of Rostock)
Michael Engelmayer (LEC)

ID	Abstract Title	Name	Company
282	Compression without compromise: Dynamic optimization of combustion in dual-fuel engines with VCR	Marcel Ott	WinGD
291	Assessment of ammonia combustion in large engines	Andrej Poredos	AVL List
456	Effects of methanol reforming gas addition on the combustion characteristics of methanol engines	Wenju Ma	Harbin Engineering University
457	Evaporation and combustion characteristics study of diesel oil droplets in premixed ammonia/air	Meijia Song	Dalian University of Technology
161	Development of an ammonia-fueled cracker-engine unit as propulsion system for inland waterway vessel	Annalena Braun	Karlsruhe Institute of Technology

Day: **Wednesday**
Time: **11:20 – 13:00**

Topic 17: Simulation technologies, digital twins and complex system simulation

Session Name: Components optimization

Session Organizer:
Ioannis Vlaskos (WinGD)
Mingfa Yao (Tianjin University)

ID	Abstract Title	Name	Company
100	Virtualization of fuel injection system development for methanol-fueled large-bore marine engines	Ugo Olivaud	GammaTech Engineering
132	The effect of the engine's thermal environment on the injection performance of future fuel injectors	Gangao Lu	Harbin Engineering University
61	Predictive Dual-Fuel Combustion and Emission Modeling for Large Engines Using GT-Power Analysis	Shiyan Li	Shanghai Jiao Tong University

Day: **Thursday**
Time: **16:20 – 18:00**

Topic 17: Simulation technologies, digital twins and complex system simulation

Session Name: Combustion development I (gas, methanol, hydrogen, ammonia)

Session Organizer:
Ioannis Vlaskos (WinGD)
Mingfa Yao (Tianjin University)

ID	Abstract Title	Name	Company
41	Verification of a CFD model on hydrogen combustion in a large marine two-stroke engine	Yudai Abe	Mitsui E&S
156	Numerical and experimental analysis of gas DI operation on a medium speed dual fuel marine engine	Jules Christopher Dinwoodie	University of Rostock
197	CFD simulations of prechamber gas engines with temporal adjustment of turbulent flame speed	Azusa Fuse	Mitsubishi Heavy Industries
281	CFD simulation of hydrogen combustion in an optical engine, focus on thermodynamical differences	Evelyn Flesch	Technical University of Munich

Day: **Monday**
Time: **16:20 – 18:00**

Topic 17: Simulation technologies, digital twins and complex system simulation

Session Name: Combustion development II (gas, methanol, hydrogen, ammonia)

Session Organizer:
Ioannis Vlaskos (WinGD)
Mingfa Yao (Tianjin University)

ID	Abstract Title	Name	Company
79	Numerical study on hydrogen-diesel and ammonia-diesel combustion in internal combustion engines	Kenji Hiraoka	Yanmar Holdings
475	Parametric investigation of hydrogen-diesel combustion for a marine medium-speed dual fuel engine	Gerasimos Theotokatos	University of Strathclyde
524	A computational study of methanol combustion chemistry at high pressures	Lambros Kaiktsis	University of Doha for Science and Technology
12	An establishment of a digital storehouse based on ROM, FBS and RPA technologies for the rapid design of low-vibration marine engines	Daegeun Lim	Hyundai Heavy Industries

Day: **Wednesday**
Time: **16:20 – 18:00**

Topic 18: Mechanics, materials and coatings

Session Name: Mechanics, materials and coatings

Session Organizer:
Alexander Leitner Audoui (Innio Waukesha Gas Engines)
Tero Frondelius (Wärtsilä)

ID	Abstract Title	Name	Company
96	"SOFT" sputter bearing, a new solution balancing performance and robustness	Ping Li	Miba Precision Components (China)
207	Optimizations of both reliability and thermal efficiency of medium speed diesel engine	Hao Zou	Dalian CRRC Diesel Engine
300	Mechanical development challenges and solutions for alternative fuels	Martin Rustler	AVL List
390	Enhanced reliability of composite pistons: A study on fretting damage	Gang Liang	SMDERI
466	1st methanol generation of valve spindles and seat ring for newbuildings and retrofit	Janis Kimm	Märkisches Werk

Day: **Tuesday**
Time: **11:20 – 13:00**

Topic 19: Visualizations

Session Name: Hydrogen

Session Organizer:
Gerhard Pirker (LEC)
Long Liu (Harbin Engineering University)

ID	Abstract Title	Name	Company
60	Optical visualization of performance-limiting combustion phenomena in marine and stationary hydrogen engines	Sven Ole Deist	Technical University of Munich
451	Hydrogen engines for power generation: How to overcome the limitation posed by combustion anomalies?	Constantin Kiesling	LEC
269	Ignition and combustion behaviour of H_2 / CH_4 blends at conditions relevant for large engines	Silas Wüthrich	University of Applied Sciences and Arts Northw. Switzerland
28	Ignition and combustion characteristics of hydrogen-diesel dual-fuel direct injection	Hao Wu	King Abdullah University of Science and Technology
45	Hydrogen in Large-Bore Engine Applications: Insights on Experimental and Simulative Research	Andreas Zepf	Technical University of Munich

Day: **Monday**
Time: **16:20 – 18:00**

Topic 19: Visualizations

Session Name: Ammonia

Session Organizer:
Gerhard Pirker (LEC)
Long Liu (Harbin Engineering University)

ID	Abstract Title	Name	Company
106	Visualizing ammonia combustion: From laminar flames to engine application	Marc Klawitter	Graz University of Technology
501	Ammonia pre-chamber engine combustion with online ammonia cracking	Jiuling Sun	Tianjin University
24	Experimental study of relation between combustion and emission characteristics for ammonia	Shota Hayashida	Oita University
438	Effect of turbulence intensity on the spray statistical variation under marine engine-like condition	Chen An	Harbin Engineering University

Day: **Thursday**
Time: **11:20 – 13:00**

Topic 20: Operators‘ perspective

Session Name: Safety aspects of new & alternative fuels

Session Organizer:
Dirk Bergmann (Accelleron)
Christopher Stoos (Southwest Research Insitute)

ID	Abstract Title	Name	Company
56	Development of supply and safety system for hydrogen in two-stroke marine diesel engine	Ryosuke Ishibashi	Mitsui E&S Co.
212	Operation of Diesel and Otto cycle ammonia engine, treatment and safety systems	Seungpil Lee	HD Korea Shipbuilding & Offshore Engineering
415	The path to zero: A safe deployment of ammonia as maritime fuel	Martin Eriksen	Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping
220	Experimental study of dispersion characteristics of ammonia under various humidity conditions	Dongguk IM	Korean Register

Day: **Thursday**
Time: **11:20 – 13:00**

Topic 20: Operators‘ perspective

Session Name: Power-gen

Session Organizer:
Dirk Bergmann (Accelleron)
Christopher Stoos (Southwest Research Insitute)

ID	Abstract Title	Name	Company
73	Flexible operation of gas engines for grid power stability and carbon neutrality	Yohei Tsuji	Kawasaki Heavy Industries
175	ICE’s in the future energy landscape with increased renewables	Martial Claudepierre	Wärtsilä
215	Development of an automatic generation scheduling system aimed at efficient operation of power plant	Takashi Fukuoka	IHI Power Systems
95	Successful demonstration of decarbonization through hydrogen blending in power plant engines	Fredrik Östman	Wärtsilä
6	Advancements and pathways for hydrogen and ammonia in maritime applications: A technical simulation	Sadi Tavakoli	SINTEF

Day: **Monday**
Time: **13:40 – 15:40**

CIMAC Congress Technical Tours 2025

Tour 1 (08:30 – 16:30)

- WinGD / Burkhardt Compression / Kistler / HUG Engineering /

- Details on cimaccongress.com

Tour 2 (07:30 – 13:30)

- Accelleron & Libs

- Details on cimaccongress.com

Tour 3 (07:30 – 15:00)

- Duap

- Details on cimaccongress.com

Technical Tours have to be booked in advance of the Congress, to allow all companies to prepare accordingly. The number of tickets is limited.

Register here!

Day: **Friday**
Time: **07:30 – 15:30**

CIMAC CONGRESS 25
ZURICH, MAY 19 – 23, 2025

Poster Session Monday

ID	Abstract Title	Name	Company
38	Development of China First Ammonia Dual-fuel large engine for marine applications	Ahmed Al-Sened	Dalian CRRC Diesel Co. Ltd
344	Rotordynamic performance prediction of electrically assisted turbocharger	Baoyin Duan	Harbin Engineering University
54	Research on Performance Optimization of Methanol Engine Based on the Multi-Model Combined NSGA-II	Beidong Zhang	Huazhong University of Science and Technology
352	Power distribution in cruise ship generator sets using different fuels under impact of carbon tax	Guozheng Liu	Harbin Engineering University
204	Research on Modeling and Simulation Technology of Ammonia Fuel Digital Engine System	Haopeng Nie	China Shipbuilding Power Engineering Institute CO., LTD
495	Research and multi-objective optimization of fuel cavitation flow inside fuel injector control valve	Jiangtao Li	Wuhan university of technology
159	Investigation on the thermal cavitation effect of an injector control valve	Jianhui Zhao	Harbin Engineering University
9	Combustion Characteristics of a Dual-Fuel Marine Engine with Different Methanol Substitution Rate	Xiao Li	National Key Laboratory of Marine Engine Science and SMEDRI

Authors are kindly asked to be present at the poster during the first 15min of the break to answer possible questions.
Posters are on display all day long.

Day: **Monday**
Time: **15:40 – 16:20**

Poster Session Tuesday Morning

ID	Abstract Title	Name	Company
486	Research on Detection Methods for Unconventional Pollutants in Ship Methanol Engine Exhaust Gas	Hanqiao Zhang	Shanghai Marine Diesel Engine Research Institute
318	Research on injection volume closed-loop control based on MPC for high-pressure common rail system	Bingxin Liu	Harbin Engineering University
412	Study of Methanol Engine on Tribology Properties: ZDDP Additive Degradation and Tribofilm Behavior	Xuan Ma	Harbin Engineering University
425	Assessment of Bio-Oil and Off-Spec Biodiesel Blends for Maritime Applications	Sara Rezaee	Viswa Group
221	Applying the Scrubber for Leaked NH3 and Derivation of Optimal Wash Water Management Measure	Soomin Kang	Korean Register
243	Realization of decarbonization through development of marine hydrogen dual fuel engine	Masato Nakai	Kawasaki Heavy Industries, Ltd.
186	Development and application of a flex-fuel single cylinder platform for high-speed engines	Francesco Accurso	Dumarey Automotive Italia S.p.A.
178	Experimental Long-Term Study of a Methane Oxidation Catalyst on a Medium-Speed Dual-Fuel Engine	Pascal Seipel	University of Rostock

Authors are kindly asked to be present at the poster during the first 15min of the break to answer possible questions.
Posters are on display all day long.

Day: **Tuesday**
Time: **10:40 – 11:20**

Poster Session Tuesday Afternoon

ID	Abstract Title	Name	Company
19	Energy, exergy, economic, and environmental (4E) analysis of S-CO2 Brayton cycle for low-speed engine	Liangtao Xie	Wuhan University of Technology
500	Experimental study on macroscopic characteristics of free and impingement spray of low diesel temper	Liyan Zhao	Kunming University of Science and Technology
162	Experimental study of injector spray inconsistency based on a combined spray momentum and visualization	Long guo He	Harbin Engineering University
349	Research on Unbalanced Fault Diagnosis of Marine Turbocharger Rotor Based on Transfer Learning	Luyuan Liu	Wuhan University of Technology
504	Lubricant Performance and Reliability in Ammonia-Fueled Internal Combustion Engines	Maria Rappo	Total Energies
383	Study on the performance and optimization of pilot diesel-ignited HPDI methanol combustion	Minghao Xiahou	Tianjin University
196	Study of Main Engine Behavior During Rough Seas Based on Ship Monitoring Data	Rei Miratsu	Nippon Kaiji Kyokai (Class NK)
310	Optimization of Pre-Chamber Design and Operation for Marine Future Fuels	Nathan Peters	Dumarey USA
356	Investigation on dynamic electromechanical coupling effects in diesel generator sets	Jie Tao	Harbin Engineering University

Authors are kindly asked to be present at the poster during the first 15min of the break to answer possible questions.
Posters are on display all day long.

Day: **Tuesday**
Time: **15:40 – 16:20**

Poster Session Wednesday Morning

ID	Abstract Title	Name	Company
228	Advancing Decarbonization of Electrification with IHI Power Management System	Masaki Takiguchi	IHI Power Systems
498	Non-destructive testing method research on cracking tendency of welding gas valve surface	Hankun Liu	National Key Laboratory of Marine Engine Science and Technology
142	Corrosion study on carbon steel immersed in alternative fuels	Carolin Nuortila	University of Vaasa
469	Selective catalytic reduction systems for ammonia combustion in heavy-duty engines-a modelling study	Madhumitha Rajendran	University of Sheffield
523	Usage of 1-D system simulation for the development of a maritime PEM-Fuel cell system	Stephan Karmann	Freudenberg
40	Analysis of Zero-Emission Scenarios of a Cruise Ship using a Modelica-based Digital Twin	Marouane Barbri	University of Rostock
347	Real-ship application of composite energy storage DC energy management control technology for hybrid	Chen Defu	Shanghai Marine Diesel Engine Research Institute
55	Study on Ammonia/Diesel Coaxial Injection Combustion Based on a Rapid Compression Expansion Machine	Jie Wu	Harbin Engineering University
226	Simulation Research of the Phase change in Ammonia Supply System Based on Amesim	Hua Li	Shanghai Marine Diesel Engine Research Institute

Day: **Wednesday**
Time: **10:40 – 11:20**

Authors are kindly asked to be present at the poster during the first 15min of the break to answer possible questions.
Posters are on display all day long.

Poster Session Wednesday Afternoon

ID	Abstract Title	Name	Company
430	Study on the ammonia diffusion combustion characteristics under active thermal atmosphere effects	Rui Yang	Tianjin University
496	Radical derating as retrofit technology to reduce carbon impact from large 2-stroke marine engines	Stefano Emanuele Iannuzzi	Wartsila Services Switzerland
295	Methanol-fueled marine engine: combustion characteristics and new lubricant performance need	Valerie Doyen	Total Energies
206	Mechanism development and combustion system study of low-speed two-stroke marine hydrogen engine	Wenjing Qu	Dalian University of Technology
337	Pre-Chamber Strong Swirl Combustion Model for a Dual-Fuel Engine's Digital Twin System	Xiao Han	Harbin Engineering University
260	Research on Multi-objective Control Technology for Heavy-duty Natural Gas Engines Based on H2/H∞	Xingchao Shi	Weichai Power Co., Ltd
462	Optimization of combustion in diesel pilot ignition high-pressure direct-injection liquid ammonia	Shiwu Yu	Tianjin University
189	Influence of combustion gas temperature on piston deposits for diesel and NH3 dual-fuel combustion	Brian Kaul	Oak Ridge National Laboratory

Day: **Wednesday**
Time: **15:40 – 16:20**

Authors are kindly asked to be present at the poster during the first 15min of the break to answer possible questions.
Posters are on display all day long.

Poster Session Thursday

ID	Abstract Title	Name	Company
112	Research on methanol spray characteristics of marine engine	Xinran Wang	China Shipbuilding Power Engineering Institute CO, Ltd
516	Simulation and optimization of low-pressure power turbine based on supercharged diesel engine.	Yajie Zhang	Shanghai Jiao Tong University
101	Development of CPGC M450DF-Clean, Efficient, High-Powered Medium-Speed Dual Fuel Series Engines	Yali Song	China Shipbuilding Power Engineering Institute CO., Ltd
8	Methanol Dual Fuel Engine Development Status	Yoshinori Kaji	Daihatsu Diesel MFG.CO.,LTD.
198	Application of PHM Technology in High-altitude Locomotives	Yuting Su	CRRC Dalian CO.,LTD
328	Research on the Active Permanent Magnet Torsional Vibration Control Technology for ICE	Zhou Yan	Shanghai Marine Diesel Engine Research Institute
374	Research on construction of hybrid feature fault diagnosis model of turbocharger based on data	Irong Yang	Harbin Engineering University
428	Development of a cryogenic high-pressure pump for compact FGSS high-pressure skids	Tae Hyung Park	Hyundai Heavy Industries

Authors are kindly asked to be present at the poster during the first 15min of the break to answer possible questions.
Posters are on display all day long.

Day: **Thursday**
Time: **10:40 – 11:20**

CIMAC Congress Technical Tours 2025

Tour 1 (08:30 – 16:30)

- WinGD / Burkhardt Compression / Kistler / HUG Engineering /

- Details on cimaccongress.com

Tour 2 (07:30 – 13:30)

- Accelleron & Libs

- Details on cimaccongress.com

Tour 3 (07:30 – 15:00)

- Duap

- Details on cimaccongress.com

Technical Tours have to be booked in advance of the Congress, to allow all companies to prepare accordingly. The number of tickets is limited.

Register here!

Day: **Friday**
Time: **07:30 – 15:30**

CIMAC CONGRESS 25
ZURICH, MAY 19 – 23, 2025