



8th Rostock Large Engine Symposium - Timetable

Wednesday, 11.09.2024

09:00	CIMAC Cascades	Institute of Piston Machines and Internal Combustion Engines Rostock University	Opportunity for (young) professionals from the field of large engines to present their research
15:00	LAB-Tour	Institute of Piston Machines and Internal Combustion Engines Rostock University	Guided tour through the machine hall & test benches of the institute
20:00	RGMT-Stammtisch	Yachthafenresidenz Hohe Düne Rostock-Warnemünde	Get together with conference participants



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09:00	Prof. Bert Buchholz <i>Rostock University, LKV</i>	Opening words	
09:10	MinDir Bernhardt Kluttig <i>Federal Ministry for Economic Affairs and Climate Protection</i>	Word of greeting	
Session 1: Requirements for sustainable marine fuels (Lead: Prof. Gunnar Stiesch)			
09:15	Timothy Wilson <i>Lloyds Register</i>	The transition to sustainable marine fuels (SMF) away from petroleum fuels	Dr. Muhammad Usman (Lloyds Register)
09:45	Dr. Michael Kass <i>Oak Ridge National Laboratory</i>	Biofuels as heavy fuel oil substitutes in the maritime sector: Findings and potential pathways	Dr. Brian Kaul, Timothy Theiss (Oak Ridge National Laboratory), Josh Messner (U. S. Department of Energy), Dr. Eric Tan (National Renewable Energy Laboratory), Dr. Karthu Ramasamy (Pacific Northwest National Laboratory), Dr. Troy Hawkins (Argonne National Laboratory)
10:15	Sönke Diesener <i>NABU</i>	NABUs view on decarbonization of shipping with special attention on future fuels potentially harmful emissions	
10:45	Coffee break		
Session 2: Impacts of future fuels on industrial R&D processes (Lead: Prof. Sebastian Verhelst)			
11:15	Dr. Beat van Rotz <i>WinGD</i>	Experimental investigations and simulation validation regarding future fuel combustion systems of low-speed two-stroke engines using WinGD's spray and combustion chamber	Pascal Süess, Martin Bohnenblust, Dr. Christophe Barro, Dr. Omar Seddik, Dr. Andrea Schirru, Juan Reina Martinez, Dr. Andreas Schmid, Dr. German Weisser (WinGD)
11:45	Dr. Manickam Bhuvaneshwaran <i>MAN Energy Solutions SE</i>	Development of dual fuel methanol engines using CFD techniques for PFI and HPDI injection strategies	Dr. Cornelius Wagner, Dominik Krnac, Dr. Eric Lauer, Peter Holand, Dr. Matthias Auer
12:15	Lunch		



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Session 3: Engine sub-systems for future fuels (Lead: Dr. Dominik Schneider)

13:30	Dr. Qiyang Zhou <i>Accelleron c/o Turbo Systems Switzerland Ltd</i>	Turbocharging strategies to enable fuel-flexibility over a full operating map in a 4-stroke marine engine	Dr. Dirk Bergmann, Elmar Strittmatter, Herve Martin (Accelleron c/o Turbo Systems Switzerland Ltd), Prof. Gianluca D'Errico, Alberto Ballerini (Politecnico di Milano)
14:00	Georgia Voniati <i>Laboratory of Applied Thermodynamics, Aristotle University of Thessaloniki</i>	Emission control concepts for large two-stroke ammonia engines	Dr. Athanasios Dimaratos, Prof. Grigorios Koltsakis, Prof. Leonidas Ntziachristos (Laboratory of Applied Thermodynamics, Aristotle University of Thessaloniki)
14:30	Pitches	CFD investigation of explosion pressure and pressure relief from methane-hydrogen-air mixtures in confined spaces Development of a modular hydrogen and methane monitoring system for the crankcase of large marine and stationary engines Methanol PFI-injector platform for medium speed engines The InnoFuels project	Elomatic Consulting & Engineering Oy Schaller GmbH & Co. KG Heinzmann GmbH & Co. KG Rostock University, LKV

15:00 Coffee break

Session 4: Pathways to green marine fuels (Lead: Dr. Dirk Bergmann)

15:30	Dr. Fabian Pinkert <i>FVTR GmbH</i>	Cashew nutshell liquid compatibility testing – Methodology and case reports	Dr. Robert Bank, Martin Drescher, Dr. Martin Theile (FVTR GmbH), Dr. Fanny Langschwager, Dr. Ulrike Schümann (Rostock University, LKV), Antje Hoppe (FVTR GmbH)
16:00	Dr. Satoshi Kawauchi <i>National Institute of Maritime, Port and Aviation Technology, National Maritime Research Institute</i>	Progress and prospect of combustion technologies developed in Japan for zero-carbon fuels	Prof. Koji Takasaki (Kyushu Univ. & National Maritime Research Institute, Japan), Dr. Chiharu Kawakita (New Energy and Industrial Technology Development Organization (NEDO)), Dr. Yoichi Niki, Dr. Yasuhisa Ichikawa (National Institute of Maritime, Port and Aviation Technology, National Maritime Research Institute), Akihiro Miyanagi, Koji Edo (Japan Engine Corporation)
16:30	Dr. Nicole Wermuth <i>Large Engines Competence Center</i>	High-pressure ammonia-diesel dual fuel combustion in medium-speed engines	Markus Roßmann (Graz University of Technology - Institute of Thermodynamics and Sustainable Propulsion Systems), Dr. Maximilian Malin (Large Engines Competence Center), Prof. Andreas Wimmer (Graz University of Technology - Institute of Thermodynamics and Sustainable Propulsion Systems), Dr. Marco Coppo (OMT SpA)

18:00 Boat tour & visit of the hydrogen application centre

19:30 Social evening event



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Session 5: Ammonia combustion (Lead: Dr. Daniel Chatterjee)

08:30	Annalena Braun <i>Karlsruher Institut für Technologie – Institut für Kolbenmaschinen</i>	Combustion concept for ammonia-fuelled cracker-engine-unit as propulsion system for inland waterway vessels	Dr. Heiko Kubach, Dr. Sören Bernhardt (Karlsruher Institut für Technologie - Institut für Kolbenmaschinen), Torsten Baufeld (Liebherr Machines Bulle SA), Dr. Sascha Prehn (Rostock University, LKV), Prof. Hinrich Mohr (GasKraft Engineering)
09:00	Phillip Thorau <i>WTZ Roßlau gGmbH</i>	Fundamental investigation of an ammonia HPDF combustion process on high-speed engines	Karsten Stenzel, Dr. Christian Reiser (WTZ Roßlau gGmbH)
09:30	Dr. Shinsuke Marakami <i>AVL List GmbH</i>	A spark ignited combustion concept for ammonia powered high-speed large engines – Test bed and 3D CFD simulation results	Dr. Martin Kirsten, Thomas Kammerdiener, Andrej Poredos, Dr. Günter Figer, Maria Segura (AVL List GmbH)
10:00	Coffee break		

Session 6: Methanol combustion (Lead: Prof. Kai Herrmann)

10:30	GwangHyeon Yu <i>Hyundai Heavy Industries</i>	HD Hyundai Heavy Industries organizing lineup of medium-speed methanol engine	in clarification
11:00	Prof. Sebastian Verhelst <i>Ghent University, Lund University</i>	Simulation of large bore methanol-fuelled spark ignition engines	Ward Suijs, Yi-Hao Pu (Ghent University)
11:30	Dr. Ludovico Viglione <i>Wärtsilä Services Switzerland</i>	Methanol retrofit technologies, from concept to engine operation – Performance and emissions evaluations on a large bore engine	Dr. Marios Ioannou, Alejandro Calvo Oliveira (Wärtsilä Services Switzerland), Dr. Lauge Thorsen (Wärtsilä Danmark A/S), Gennaro Caputo, Michele Placanica (Wärtsilä Italia S.p.A.)
12:00	Lunch		



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Session 7: Optical injection and combustion analysis (Lead: Prof. Andreas Wimmer)

13:15	Silas Wütrich <i>FHNW - University of Applied Sciences and Arts Northwestern Switzerland</i>	The GHG reduction potential of high-IMEP pure ammonia combustion	Patrick Albrecht, Patrick Cartier, Dr. Bruno Schneider, Prof. Kai Herrmann (FHNW - University of Applied Sciences and Arts Northwestern Switzerland)
13:45	Marco Coppo <i>OMT SpA</i>	Design and characterisation of a port fuel injector for high power medium speed engines	Claudio Negri (OMT SpA), Dr. Fabian Pinkert (FVTR GmbH)
14:15	Jules Christopher Dinwoodie <i>Rostock University, LKV</i>	3D – CFD simulation and experimental characterisation of direct gaseous injection for a medium speed dual-fuel engine	Sebastian Cepelak, Manuel Glauner, Pascal Seipel, Dr. Karsten Schlee, Prof. Bert Buchholz (Rostock University, LKV)
14:45	Coffee break		

Session 8: System approaches for GHG reduction (Lead: Dr. Horst Brünnet)

15:15	Domagoj Zovak <i>Robert Bosch GmbH</i>	Carbon capture for point source emissions – Meeting market requirements with Innovation	Dr. Franz Sebastian Krüger (Robert Bosch Manufacturing Solutions GmbH), Dr. Anne-Kathrin Maier, Klaus Meyer, Dr. Stefan Jungmayr (Robert Bosch GmbH), Dr. Christoph Kendlbacher (Robert Bosch AG)
15:45	WILDCARD	CIMAC Cascades	
16:15	Prof. Bert Buchholz <i>Rostock University, LKV</i>	Closing words	