

THIESEL 2026 Provisional programme

Wednesday 9th September 2026

S1.1	AMMONIA INJECTION & COMBUSTION
8:30-9:00	KN1.1 Nicole WERMUTH, T.U. Graz, Austria
9:00-9:25	Large-eddy simulation of ammonia direct-injection combustion: Comparing auto-ignition and diesel spray-assisted ignition W. Siddiqui ¹ , G. Bracho ² , S. Karimkashi ¹ , J. Hyvönen ² , and V. Vuorinen ² ¹ Aalto University, Finland ² Universitat Politècnica de València, Spain ³ Wärtsilä Finland Oy, Finland
9:25-9:50	Numerical and experimental investigation of ammonia spray at engine-relevant conditions R. Soni ¹ , D. Pinilla-Fernández ² , G. Bracho ² , J.M. García-Oliver ² , C. Gößnitzer ¹ , S. Posch ³ , G. Pirker ¹ , N. Wermuth ^{1,3} ¹ Large Engines Competence Center, Graz, Austria ² Universitat Politècnica de Valencia, Spain ³ Graz University of Technology, Austria
9:50-10:15	Understanding NH₃-H₂ Co-Combustion in a Spark-Ignited CFR Engine J. Loprete ^{1,2} , J.P. Trelles ³ , N. Van Dam ³ , J.H. Mack ³ , D. Assanis ^{1,2,4} ¹ Stony Brook University, USA ² Advanced Energy Research and Technology Center, USA ³ University of Massachusetts Lowell, USA ⁴ Institute for Advanced Computational Science, USA
10:15-10:45	Coffee break
S1.2	EMISSIONS MEASUREMENT & AFTERTREATMENT
10:45-11:10	Challenges and Solutions of Exhaust Gas Measurement for Alternative Fuels S.C. Eichmann ¹ , T. Bodsch ² ¹ HORIBA Europe, Oberursel, Germany ² HORIBA Europe, Darmstadt, Germany
11:10-11:35	Experimental Studies on the Effects of Catalyst Layer Porosity and Active Site Amount on NO_x Purification Characteristics in Urea SCR Catalysts F. Yoshida, Y. Ueki, S. Ratnak, J. Kusaka Waseda University, Tokyo, Japan
11:35-12:00	A-EAT demonstration of Reducing Global and Local Vehicle Emissions with Hybrid Powertrain, Dedicated ATS, MtG Advanced Fuel, and an impact assessment using Air Quality modelling T. Sarica ¹ , E. Laigle ¹ , V. Gordillo ¹ , M. Mitschler ¹ , V. Gaste ² , M. Olteanu ³ , C. Chaillou ¹ ¹ Aramco Fuel Research Center, France ² AVL LMM, France ³ HORSE Technologies, Romania
12:00-12:25	Catalytic aftertreatment systems for ammonia-diesel dual fuel combustion A. Sayeed ¹ , N.D. Khedkar ¹ , M. Wu ¹ , M. Garroum ¹ , A. Cova-Bonillo ¹ , J.M. Herreros ¹ , S. Zeraati Rezaei ¹ , A. Tsolakis ¹ , P. Millington ² , S. Alcove-Clave ² , A. Tony ² , T. Samuels ² , J. Sanz-Argent ³ ¹ University of Birmingham, UK ² Johnson Matthey Technology Centre, UK ³ Fundación Valenciaport, Spain

12:25-12:50	Robustness of Post SCR NO_x Sensor Placement Under NH₃ Spatial Non-Uniformity: A CFD Ensemble Study I.F. Cozza ¹ , M.P. Centini ¹ , C. Ciaravino ¹ , R. McAlpine ² ¹ Dumarey Automotive Italia, Italy ² General Motors, USA
12:50-14:30	Lunch
14:30-15:30	Poster session 1 / Commercial exhibition / Visit 1 to CMT's Laboratories
S1.3	SUSTAINABLE FUELS INJECTION
15:30-16:00	KN1.3 Zhixia He, Jiangsu University, China
16:00-16:25	High-Fidelity 3D-CFD Simulation of Hydrogen Injection: Different Modelling Approaches Balancing Accuracy and Computational Efficiency C. Segatori, M. Orlando, A. Scalambro, A. Piano, F. Millo Politecnico di Torino, Italy
16:25-16:50	Injection and fuel blending strategies for low-temperature ignition of methanol in compression-ignition applications J. Manin, D.K. Eyice, D. Lopez-Pintor Sandia National Laboratories, USA
16:50-17:15	Optical Study on Spray Combustion Characteristics of E-diesel and its surrogate under Compression-Ignition Engine-like Conditions M. Khalaf ¹ , Shuo Feng ¹ , Tiemin Xuan ¹ , Licheng Zhu ¹ , Min Xu ¹ , Jiawei Cao ² , R. Payri ³ , Zhixia He ⁴ , Ming Jia ⁵ ¹ School of Energy and Power Engineering, Jiangsu University, China ² Department of Marine Technology, NTNU, Norway ³ Universitat Politècnica de València, Spain ⁴ Jiangsu University, China ⁵ Dalian University of Technology, China
17:15-17:45	Coffee break
S1.4	SPARK IGNITION COMBUSTION PHENOMENA
17:45-18:10	Knocking Behavior of Regenerative Fuels in a Miller Cycle Gasoline Engine H.F. Schmid, J. Pfeil, T. Koch Karlsruhe Institute of Technology, Germany
18:10-18:35	Effect of Ambient Pressure on Hydrogen Jet Structure and Combustion Characteristics under Controlled Local Equivalence Ratio Conditions Heetae Yang, Youngmin Ki, Jungho Justin Kim, Joonsik Hwang, Choongsik Bae Korea Advanced Institute of Science and Technology, Republic of Korea
18:35-19:00	In-cylinder mixture field measurements in spark-ignited DI hydrogen engines M. Peters, İ. Alp, J. Erhard, P. Ye, A. Dreizler, B. Böhm Technical University of Darmstadt, Germany
19:00-19:25	Characterization of the Mixture Preparation Process for a H₂ Combustion System in a Transparent Engine using Laser-Induced Fluorescence (LIF) and 3D-CFD-Simulation J.N. Geiler ¹ , D. Kumar ² , K.G. Stapf ¹ , P. Gastaldi ² ¹ Robert Bosch - Power Solutions, Germany ² Aramco Fuel Research Center, France