

Eastern Standard Time				
Wednesday, October 13, 2021 - Day 1				
9:30 AM	9:40 AM	Will Northrop, ICE Division Chair - Welcome (Live) CEO ASME - Tom Costabile		
9:40 AM	10:25 AM	Keynote 1 (Live) Kelly Senecal, Conference Co-Chair- Moderator (Live) Dr. James P. Szybist, Propulsion Science Section at Oak Ridge National Laboratory Presentation Title: "Perspective on Engines in a Decarbonized Transportation Sector" Q&A		
10:25 AM	10:30 AM	Break		
10:30 AM	11:30 AM	<b>Room 1</b> <b>Session 01-02 - Large Bore Engines II</b> <b>Chair: Chris Stoos</b>	<b>Room 2</b> <b>Session 02-02: Spark Ignition II (Alternative Fuels)</b> <b>Chair: Francis Haas</b>	<b>Room 3</b> <b>Session 04-01 Controls I</b> <b>Chair: Vittorio Ravaglioli</b> <b>Co-Chair: Jose Ramon Serrano</b>
		ICEF2021-67492 Analysis on Combined Heat and Power Hybrid Systems for Unconventional Drilling Operations Author: Diego Dranuta Ferrer	ICEF2021-68203 Investigations of Low-Temperature Heat Release and Negative Temperature Coefficient Regions of Iso-Paraffinic Kerosene in a Constant Volume Combustion Chamber Author: Richard Smith	ICEF2021-67541 Modeling and Control of a Hybrid Opposed Piston Engine Author: Joseph Drallmeier
		ICEF2021-67511 A Fundamental Thermodynamic Investigation of Compression Ratio Effects in Relation to Diesel Engine Size Author: Kevin Burnett	ICEF2021-66772 Environment and Economic Assessment of CNG and Gasoline Engines: An Experimental Analysis Author: Sridhar Sahoo	ICEF2021-66616 Control-Oriented Model of the Mean and Dispersion of Diesel Combustion Phasing With Ignition Assis Author: Omar Ahmed
			ICEF2021-67547 Experimental Investigation of a Simulated Byproduct Fuel Mixture From the CI-ODH Process in a Spark-Ignition Engine Author: Kaushik Nonavinakere Vinod	ICEF2021-67710 Ammonia Slip Estimation Based on ASC Control-Oriented Modelling And OBD NOx Sensor Cross-Sensitivity Analysis Author: Enrique J. Sanchis
		Room #1 - 15 mins Q&A LIVE	Room #2 - 15 mins Q&A	Room #3 - 15 mins Q&A
11:30AM	11:35AM	Break		
11:35AM	12:20PM	Keynote 2 (Live) Kelly Senecal, Moderator Dr. Elana Chapman, Senior Fuels/Biofuels Engineer at General Motors (GM) Presentation Title: "The Shifting Energy Landscape and the Future of Fuels" Q&A		
12:20PM	12:30PM	Lunch Break		
12:30PM	1:30PM	<b>Room 1</b> <b>Session 02-03 - Compression Ignition I</b> <b>Chair: Hailin Li</b>	<b>Room 2</b> <b>Session 06-01 - Ignition Modeling</b> <b>Chair: Anqi Zhang</b>	<b>Room 3</b> <b>Session 04-03 Emissions I</b> <b>Chair: Stani Bohac</b> <b>Co-Chair: Richard Burke</b>
		ICEF2021-67395 Primary & Secondary Reference Fuel Effects as a Function of Compression Ratio in a Cfr Diesel Engine Author: Jim Cowart	ICEF2021-67598 High-Fidelity Energy Deposition Ignition Model Coupled With Flame Propagation Models at Engine-Like Flow Conditions Author: Samuel Kazmouz	ICEF2021-67633 Development of a Low-Cost Exhaust H2 Measurement Method for In-Use Vehicles Author: Mark Guan
		ICEF2021-67749 A Numerical and Experimental Study of Soot Precursor and Primary Particle Size of N-Butylbenzene in Laminar Flame Author: Zhiwen Gan	ICEF2021-67902 CFD Modeling of Low Temperature Ignition Processes From a Nanosecond Pulsed Discharge at Quiescent Conditions Author: Vyaas Gururajan	ICEF2021-67741 Hydrocarbon Species Impact on NO to NO2 Conversion in a Compression Ignition Engine Under Low Temperature Combustion Conditions Author: Nupur Gupta
		ICEF2021-67785 Evaluating Diesel/Biofuel Blends Using Artificial Neural Networks and Linear/Nonlinear Equations Author: Travis Kessler	ICEF2021-68226 Multiphysics Modeling of Spark Discharges in High Crossflow Ignition Environments Author: Vivek Subramaniam	ICEF2021-68317 Hardware-in-the-Loop Investigation of Emissions Challenges in Hybrid Medium- and Heavy-Duty Powertrains Using a Pre-Production Diesel-Electric Parallel Hybrid System With and Without Stop-Start Operation Author: Scott Curran
		Room #1 - 15 mins Q&A LIVE	Room #2 - 15 mins Q&A	Room #3 - 15 mins Q&A
1:30PM	1:35PM	Break		
		<b>Room 1</b> <b>Session 06-06 Machine Learning</b> <b>Chair: Pinaki Pal</b>	<b>Room 2</b> <b>Session 06-05 Advanced Combustion Engine Modeling</b> <b>Chair: Haiwen Ge</b>	<b>Room 3</b> <b>Session 04-04 Emissions II</b> <b>Chair: Richard Burke</b> <b>Co-Chair: Jose Ramon Serrano</b>
		ICEF2021-67925 Data-Driven Approaches to Learn HyChem Models Author: Weiqi Ji	ICEF2021-67836 A Numerical Study on the Effects of Egr Dilution in a Pre-Chamber Ignited Natural Gas Engine Author: Prasanna Chinnathambi	ICEF2021-70947 On Blow-by Aerosol Sources in a Single-Cylinder Crankcase Environment Author: Niclas Nowak

1:35PM	2:35PM	ICEF2021-76121 Efficient Optimization of Fuel Formulation Using Adaptive Learning and Artificial Intelligence Author: Juliane Mueller	ICEF2021-74466 The Interaction Between the Pilot Diesel and Main NG Injection in an HPDI Engine Author: L.M.T.Somers	ICEF2021-67794 Characterization of a Lightly Loaded Underfloor Catalyzed Gasoline Particulate Filter in a Turbocharged Light Duty Truck Author: Stani Bohac
		ICEF2021-76148 An Active Machine Learning Algorithm (Activo) for Accelerating Simulation-Driven Engine Design Optimization Author: Opeoluwa Owoyele	ICEF2021-76576 Cfd Modeling of Pre-Spark Heat Release in a Boosted Disi Engine Author: Hengjie Guo	ICEF2021-67337 Effect of Butanol on the Performance of DeNOx Aftertreatment Systems of a Diesel Vehicle Under WLTC Driving Conditions Author: Juan Hernández
		Room #1 - 15 mins Q&A LIVE	Room #2 - 15 mins Q&A	Room #3 - 15 mins Q&A
2:35PM	2:40PM	Break		
2:40PM	4:10PM	<p align="center"><b>Panel Session 1</b>  <b>Moderators: Sibendu Som, Tom Lavertu</b>  <b>"Towards Decarbonizing Heavy-Duty Freight Transportation"</b>  <b>Jian Li, Volvo Group</b>  <b>Michael Weismiller, Department of Energy</b>  <b>Daniel Mohr, Cummins Inc.</b>  <b>Maarten Meijer, PACCAR</b>  <b>James Cigler, Navistar</b></p>		
4:10PM	4:15PM	Break		
4:15 PM	4:55 PM	<b>Room 1</b> <b>Session 01-01: Large Bore Engines I</b> <b>Chair: Munidhar Biruduganti</b>	<b>Room 2</b> <b>Session 02-01: Spark Ignition I</b> <b>Chair: Gregory Bogin</b>	<b>Room #3</b> <b>Session 03-02 - Combustion Diagnostics</b> <b>Chair: Isaac Ekoto</b> <b>Co-Chair: Brian Fisher</b>
		ICEF2021-67715 Optimization of a Marine Medium-Speed Engine With Multi-injector System by 1d Predictive Simulation Author: Long Liu	ICEF2021-67516 Analysis of Premixed Laminar Combustion of Methane With Noble Gases as a Working Fluid Author: Mammadbaghir Baghirzade	ICEF2021-66274 Application of Conditional Space-Time Proper Orthogonal Decomposition to Engine In-Cylinder Flow Analysis Author: Rui Gao
		ICEF2021-67717 A Numerical Investigation on Mixing Characteristics of Natural Gas Jets With High-Pressure Injection Author: Long Liu	ICEF2021-67780 Demonstration of the Benefits of SAE 30 Stationary Gas Engine Oil in Full Scale Engine Tests Author: Zoe Fard	ICEF2021-67489 Optical and Numerical Investigations of Flame Propagation in a Heavy Duty Spark Ignited Natural Gas Engine Author: Cosmin Dumitrescu
		Room #1 - 10 mins Q&A LIVE	Room #2 - 10 mins Q&A	Room #3 - 10 mins Q&A
5:00PM	5:40PM	Awards Ceremony		
<b>Thursday, October 14, 2021 - Day 2</b>				
9:30AM	10:20AM	<p align="center"><b>Welcome/Keynote 3 (Live)</b>  <b>Kelly Senecal - Introduction and Moderator</b>  <b>Cynthia Webb, Director of Regulatory Technology at the PACCAR Technical Center</b>  <b>Presentation Title: "2020 to 2030: The Decade of Remarkable Regulation Driven Heavy-Duty Diesel Engine Technology Change"</b>  <b>Q&amp;A</b></p>		
10:20AM	10:30AM	Break		
10:30AM	11:30AM	<b>Room 1</b> <b>Session 05-02: Diesel Sprays</b> <b>Chair: Tiegang Fang</b>	<b>Room #2</b> <b>Session 07-01 Exhaust System Analysis</b> <b>Chair: Kevin Anderson</b> <b>Co-Chair: Dan Richardson</b>	<b>Room 3</b> <b>Session 06-02 High Fidelity LES/DNS Modeling</b> <b>Chair: Noah Van Dam</b>
		ICEF2021-67775 A Comparison of Injection, Spray, and Combustion Characteristics for Non-Eroded and Eroded Multi-Hole Fuel Injectors Author: Gina Magnotti	ICEF2021-67757 Development of Simplified Analysis Process for Multidisciplinary Design Optimization (MDO) of Exhaust Manifold During Concept Stage Author: Nilesh Ghodke	ICEF2021-67671 Investigating the Origins of Cyclic Variability in Internal Combustion Engines Using Wall-Resolved Large Eddy Simulations Author: Sicong Wu
		ICEF2021-67831 Impact of Fuel Injection Pressure on Spray and Combustion Characteristics of Ome and Diesel Fuel Blends Author: Simon Leblanc	ICEF2021-67640 On-Engine Expansion Measurement of Exhaust Manifold for Calibrating Thermo-Mechanical Fatigue FEA Model Author: Girish Kulkarni	ICEF2021-67835 Direct Numerical Simulation of Partial Fuel Stratification Assisted Lean Premixed Combustion for Assessment of Hybrid G-Equation/well-Stirred Reactor Model Author: Chao Xu
		ICEF2021-68205 Measurement of Air-Fuel Mixing in a Diesel Spray at Engine Relevant Conditions Using Uv-Vis Dbi Diagnostic Author: Conner Godbold	ICEF2021-67753 Prediction of Exhaust System Vibration Through Harmonic Analysis & High Cycle Fatigue Life Evaluation Author: Bhaskarjyoti Saikia	ICEF2021-67848 Large Eddy Simulation of Gasoline Sprays in a Lagrangian-Eulerian Framework Using the High-Order Spectral Element Method Author: Juan Diego Colmenares Fernandez

		Room #1 - 15 mins Q&A LIVE	Room #2 - 15 mins Q&A	Room #3 - 15 mins Q&A
11:30AM	11:35AM	Break		
11:35AM	12:35PM	<b>Room 1</b> <b>Session 05-01: Modeling Fuel Injection and Sprays</b> <b>Chair: Tiegang Fang</b>	<b>Room 2</b> <b>Session 07-03 Overhead Dynamics</b> <b>Chair: Dave Rutledge</b> <b>Co Chair: Dan Richardson</b>	<b>Room 3</b> <b>Session 06-04 - System Level Modeling</b> <b>Chair: Yu Zhang</b>
		ICEF2021-67745 LES Study on Spray Combustion With Renewable Fuels Under ECN Spray-A Conditions Author: Jose M Garcia-Oliver	ICEF2021-67755 Investigation of Valvetrain Dynamics Using Transient Dynamic Simulation in Ansys Author: Ashish Koli	ICEF2021-76244 Injection Rate Shape Design of Gasoline-Like Fuels Using 1-D Hydraulic Models Operating at High Pressures Author: Tommy Tzanetakis
		ICEF2021-67888 Machine Learning-Enabled Prediction of Transient Injection Map In Automotive Injectors With Uncertainty Quantification Author: Gina Magnotti	ICEF2021-67594 Machine Learning Based Numerical Approach for Valve Seating Velocity Control in an Electromagnetic Camless System Author: Srinibas Tripathy	ICEF2021-76233 System Level Modeling Approach for Evaluation of Hybrid, Electric and Fuel Cell Powertrain Solutions in Medium Heavy-Duty Vehicles Author: Satyum Joshi
		ICEF2021-67549 Towards Modeling Cavitation and Erosion for a Multi-Component Alternative Diesel Fuel Author: Gina Magnotti	ICEF2021-76554 Analysis-Led Design of Valve Lift Profiles for High-Efficiency Dual-Fuel Combustion in a Heavy-Duty Single-Cylinder Engine Author: Deivanayagam Hariharan	ICEF2021-76776 A Numerical Investigation of Combining E-Compressor & Variable Valve Strategies Investigation for High Load Operation in a Heavy-Duty Gasoline Compression Ignition Engine Author: Praveen Kumar
12:35PM	12:40PM	Room #1 - 15 mins Q&A LIVE	Room #2 - 15 mins Q&A	Room #3 - 15 mins Q&A
12:40PM	1:30PM	<b>Break</b>  <b>Keynote 4 (Live)</b> <b>Moderator, Kelly Senecal</b> <b>Prof. Federico Millo, Professor at Politecnico di Torino, Italy</b> <b>Presentation Title: "Hydrogen as an Engine Fuel: Potentials and Challenges"</b> <b>Q&amp;A</b>		
1:30PM	1:40PM	Lunch Break		
1:40PM	2:20PM	<b>Room 1</b> <b>Session 02-04 - Compression Ignition II, Alternative Fuels</b> <b>Chair: Valentin Soloiu</b>	<b>Room 2</b> <b>Session 04-02 - Controls II</b> <b>Chair: Benjamin Pla</b> <b>Co-Chair: Vittorio Ravaglioli</b>	<b>Room 3</b> <b>Session - 07-04 Variable Compression Ratio Startup and Oxy-Fuel Combustion</b> <b>Chair: Ambikapathy Naganathan</b> <b>Co Chair: Dan Richardson</b>
		ICEF2021-67419 Potentiality of Yellow Oleander (Thevetia Peruviana) Seed Oil as an Alternative Diesel Fuel in Compression Ignition Engines Author: Ujjwal K. Saha	ICEF2021-66745 Boosting the Capabilities of Gas Stand Data Acquisition and Control Systems by Using a Digital Twin Based on a Holistic Turbocharger Model Author: Luis Miguel Garca-Cuevas	ICEF2021-67727 Demonstration a Variable Compression Ratio Startup Strategy to Reduce Cold Start Misfiring With Hydrous Bioethanol Author: Sam Cockerill
		ICEF2021-67429 An Experimental Study on a Dual-Fuel Generator Fueled With Diesel and Simulated Biogas Author: Shouvik Dev	ICEF2021-76343 Next-Cycle Dilute Combustion Control Using Online Machine Learning Author: Bryan Maldonado	ICEF2021-67707 Adapting an Internal Combustion Engine to Oxy-Fuel Combustion With In-Situ Oxygen Production Author: Luis Miguel Garca-Cuevas
		Room #1 - 10 mins Q&A LIVE	Room #2 - 10 mins Q&A	Room #3 - 10 mins Q&A
2:20PM	2:30PM	Break		
2:30PM	3:10PM	<b>Room 1</b> <b>Session 07-02 Damper Assessment and Bearing Friction</b> <b>Chair: Amit Gabale</b> <b>Co Chair: Dan Richardson</b>		<b>Room 3</b> <b>Session - 05-03 Gasoline Sprays</b> <b>Chair: Josh Bittle</b>
		ICEF2021-67750 Compression Rubber Damper Assessment Through Simulation Author: Mayur Biyani		ICEF2021-67827 Comparison of Spray Formation of a Multi and a Single Hole Gasoline Direct Injector Author: Malki Maliha
		ICEF2021-66874 Experimental Investigation of the Influence of Engine Operating and Lubricant Oil Parameters on Sliding Bearing and Friction Behavior in a Heavy-Duty Diesel Engine Author: Matheus Marques Da Silva		ICEF2021-68309 Influence of Elevated Fuel Temperatures on the Spray Characteristics of Gasoline - Ethanol Blends Author: Niranjn Miganakallu
		Room #1 - 10 mins Q&A LIVE		Room #3 - 10 mins Q&A
3:10PM	3:15PM	Break		

3:15PM	4:45PM	<p align="center"><b>Panel Session 2</b>  <b>"Pathways to Achieve Ultra-Low NOx Emissions"</b>  <b>Moderator, Ameya Joshi, Corning</b>  <b>Bill Robertson, California Air Resources Board</b>  <b>Chris Sharp, SwRI</b>  <b>Ying Yuan, Cummins</b>  <b>Steve Ciatti, PACCAR Technical Center</b>  <b>Haying Chen, Oak Ridge National Laboratory</b></p>		
4:45PM	4:50PM	Break		
4:50PM	6:05PM	<p align="center"><b>Room #1</b>  <b>Session 03-01 Novel Combustion and Emission Control Concepts</b>  <b>Chair: Hongsheng Guo</b>  <b>Co-Chair: Siddhartha Banerjee</b></p>	<p align="center"><b>Room 2</b>  <b>Session 03-03 Dual Fuel Combustion</b>  <b>Chair: Marcis Jansons,</b>  <b>Co-chairs :Giacomo Belgiorno, Deivanayagam Hariharan</b></p>	<p align="center"><b>Room 3</b>  <b>Session 06-03 Reduced Order Modeling</b>  <b>Chair: Yu Zhang</b>  <b>Co-Chair: Emma Zhao</b></p>
		ICEF2021-67851 Numerical Investigation of the Impact of Spray – Bowl Interaction on Thermal Efficiency of a Gasoline Compression Ignition Engine Author: Srinivasa Krishna Addepalli	ICEF2021-66341 Experimental Investigation of Effects of Split Diesel-Pilot Injection on Emissions From Ammonia-Diesel Dual Fuel Engine Author: Yoichi Niki	ICEF2021-66622 Simulation of Turbulent Combustion in Gasoline Direct Injection Spark-Ignited Engines Using a Stochastic Reactor Model Author: Brady Wilmer
		ICEF2021-67909 Ignition Stability Improvement and Emission Reduction via Multiple Ignition Sites Strategy Under Cold Start and Transient Conditions Author: Xiaoxi Zhang	ICEF2021-76498 Strategies to Reduce Hydrocarbon and Carbon Monoxide Emissions in Dual Fuel Engines Author: Prabhat Jha	ICEF2021-67858 Transient Thermo-Mechanical Stress Analysis of Hot Surface Probe Using Sequentially Coupled CFD-FEA Approach Author: Je Ir Ryu
		ICEF2021-66596 Achieving Near Zero Criteria Emissions in Heavy Duty Diesel Engines Author: Laurence Fromm	ICEF2021-76564 Strategies to Reduce Methane Slip in Natural Gas Diesel Dual Fuel Marine and Power Generation Engines Author: Greg Hampson	ICEF2021-67863 Estimation of Wiebe Function Parameters for Syngas and Anode Off-Gas Combustion in Spark-Ignition Engines Author: Ruinan Yang
		ICEF2021-67810 Cfd-Guided Evaluation of Spark-Assisted Gasoline Compression Ignition for Cold Idle Operation Author: Le Zhao	ICEF2021-76595 A Statistical Analysis and Modeling of Cyclic Combustion Variations in Dual Fuel Low Temperature Combustion Author: Sundar Rajan Krishnan	ICEF2021-76506 Quasi-Dimensional Si Combustion Model and Its Application in Engine Development Author: Hanjun Xu
		Room #1 - 15 mins Q&A LIVE	Room #2 - 15 mins Q&A LIVE	Room #3 - 15 mins Q&A
6:10PM	6:40PM	<p align="center"><b>Networking Event</b></p>		
		<b>Room 1 - Industry</b>		
		<b>Room 2 - Academia</b>		
		<b>Room 3- National Labs</b>		
		Conference Ends		
<b>Friday, October 15, 2021 - Day 3</b>				
8:00AM	12:30PM	SmartUQ Workshop		
1:30PM	3:00PM	Associates Meeting		
3:00PM	5:00PM	Technical Committes Meeting		