

The background of the entire page is a technical drawing of an engine, rendered in a light blue color. The drawing shows various components like the cylinder, piston, and connecting rod. The page is divided into horizontal bands of color: orange at the top, yellow in the middle, green below that, and blue at the bottom. The SAE NAPLES logo is located in the top left corner.

SAE NAPLES
An SAE International Section

ICE2019

**14th International Conference
on Engines & Vehicles**

Preliminary Program

September 15 - 19, 2019 @ Capri, Napoli

SALA A 16/09/2019			
9:00		Registration	
9:00		Opening Ceremony	
9:20		TBD- David Schutt CEO of SAE Enterprise (USA) / Chairperson: Cesare Pianese	
10:00		Propulsion system for future mobility FCA view- Maria Grazia Lisbona, FCA group (Italy) / Chairperson: Bianca Maria Vaglieco	
10:40		Coffee break	
ICENA101 - 0-D and 1-D Modeling and Numerics			
11:10	2019-24-0001	Towards An Integral Combustion Model for Model-based Control of PCCI Engines	Abhishek Y. Deshmukh, Metin Korkmaz, Marco Davidovic, Dominik Goeb, Carsten Giefer, Mathis Bode, Liming Cai and Heinz Pitsch, RWTH Aachen University
11:30	2019-24-0002	Development and Validation of a Control-Oriented Analytic Engine Simulator	Alessandro Brusa, Nicolo Cavina and Nahuel Rojo, University of Bologna; Matteo Cucchi and Nicola Silvestri, FERRARI S.p.A.
11:50	2019-24-0003	Valve Flow Coefficients under Engine Operation Conditions: Piston Influence and Flow Pulsation	Sven Fasse, University of Stuttgart; Michael Grill, FKFS; Michael Bargende, University of Stuttgart
12:10	2019-24-0005	Intake Manifold Primary Trumpet Tuning Options for Fuel Flow Limited High Performance ICE	Angelo Rosetti and Corrado Iotti, Ferrari Gestione Sportiva; Giuseppe Cantore, University of Modena e Reggio Emilia
12:30	2019-24-0068	Development of a Physically/Chemically Based Approach for 2-Stage Ignition Delay Calculation in Medium Speed Dual-Fuel Engines	Jelto Frerichs and Peter Eilts, Technische Universität Braunschweig
12:50	2019-24-0069	Exploring and Modeling the Chemical Effect of a Cetane Booster Additive in a Low- Octane Gasoline Fuel	Minh Duy LE, Mickaël Matrat and Arij Ben Amara, IFP Energies Nouvelles; Fabrice Foucher, Bruno Moreau and Yi Yu, PRISME, Université d'Orléans; Pierre-Alexandre Glaude, LRGP, CNRS-Université de Lorraine
13:30		Lunch break	
14:30		The path to CO2-neutral mobility in 2050-Marc Sens, IAV (Germany) / Chairperson: Zoran Filipi	
15:10		Coffee break	
ICENA101 - 0-D and 1-D Modeling and Numerics			
15:40	2019-24-0070	Driving Cycle and Elasticity Manoeuvre Simulation of a Small SUV Featuring an Electrically Boosted 1.0 L Gasoline Engine	Alessandro Zanelli and Federico Millo, Politecnico di Torino; Marco Barbolini, Röchling Automotive
16:00	2019-24-0071	Ignition Delay Model of Multiple Injections in CI engines	Youngbok Lee, Seungha Lee and Kyoungdoug Min, Seoul National Univ.
16:20	2019-24-0072	An Integrated Experimental and Numerical Methodology for Plug-in Hybrid Electric Vehicles 0D Modelling	Giuseppe DiPierro and Federico Millo, Politecnico di Torino; Alessandro Tansini and Georgios Fontaras, European Commission Joint Research; Mauro Scassa, FEV Italia
16:40	2019-24-0073	Experimental Investigation and Modeling of Ignition and Early Flame Propagation Stages in Operating Conditions Representative of Modern High Efficiency Spark Ignition Engines	Alessio Dulbecco and Gregory Font, IFP Energies Nouvelles, Institut Carnot IFPEN TE; Fabrice Foucher and Pierre BREQUIGNY, Université D'Orléans
17:00	2019-24-0074	Development of a dedicated CNG three-way catalyst model in 1-D simulation platforms	Dario Di Maio, Istituto Motori CNR - Univ. "Parthenope"; Carlo Beatrice and Valentina Fraioli, Istituto Motori CNR; Stefano Golini and Francesco Giovanni Rutigliano, FPT Industrial SpA
17:20	2019-24-0075	Performance and Emissions of an Advanced Multi-Cylinder SI Engine Operating in Ultra-Lean Conditions	Fabio Bozza, Daniela Tufano, Enrica Malfi and Luigi Teodosio, University of Naples "Federico II"; Cédric LIBERT, Renault SA; Vincenzo De Bellis, University of Naples "Federico II"
17:40	2019-24-0076	Virtual Chassis Dyno for Diesel Engine Tuning and Calibration	Damien Maroteaux, RENAULT SAS

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ICENA403 - Emissions Measurement and Testing			
11:10	2019-24-0152	Emission Factors Evaluation in the RDE Context by a Multivariate Statistical Approach	Livia Della Ragione and Giovanni Meccariello, Istituto Motori CNR; Marianeve Costabile
11:30	2019-24-0153	Sub-23 nm Particulate Emissions from a Highly Boosted GDI Engine	Felix Leach, University of Oxford; Andrew Lewis, Sam Akehurst and James Turner, University of Bath; David Richardson, Jaguar Land Rover Limited
11:50	2019-24-0154	A sampling and conditioning particle system for solid particle measurements down to 10 nm	Leonidas Chasapidis, Anastasios D. Melas, Apostolos Tsakis, Dimitrios Zarvalis and Athanasios Konstandopoulos, CERTH/CPERI
12:10	2019-24-0155	Analysis of the Effect of the Sampling Conditions on the Sub-23nm Particles Emitted by a Small Displacement PFI and DI SI Engines Fuelled with Gasoline and Ethanol	Silvana Di Iorio, Francesco Catapano and Bianca Maria Vaglieco, Istituto Motori CNR; Gaetano Continillo and Gianmarco Petito, UNIVERSITA DEGLI STUDI DEL SANNIO
12:30	2019-24-0156	Analysis of the Emission Conversion Performance of Gasoline Particulate Filters Over Lifetime	Stefan Sterlepper, Johannes Claßen and Stefan Pischinger, RWTH Aachen University; Christof Schernus, Michael Görden, Jim Cox, Martin Nijs and Johannes Scharf, FEV Europe GmbH; Dominik Rose and Thorsten Boger, Corning GmbH
12:50	2019-24-0158	Comparison of Different Particulate Measurement Techniques at a Heavy Duty Diesel Engine Test Bed	Tobias Michler, Johannes Dörnhöfer, Daniel Erforth, Alexander Heinz, Kai Scheiber, Philipp Weber, Niclas Nowak, Heiko Kubach, Jörg Meyer PhD, Thomas Koch and Achim Dittler, KIT - Karlsruhe Institute of Technology
13:30		Lunch break	
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ICENA403 - Emissions Measurement and Testing			
15:40	2019-24-0050	Assessing exhaust toxicity with biological detector: Configuration of portable air-liquid interface human lung cell model exposure system, sampling train and test conditions.	Michal Vojtisek-Lom, Czech Technical University in Prague; Martin Pechout and David Macoun, Czech University of Life Sciences; Rajesh Rameswaran and Kalpita Kumar Praharaj, Czech Technical University in Prague; Tereza Cervena, Jan Topinka and Pavel Rossner, Institute of Experimental Medicine
16:00	2019-24-0051	Semi-Volatile Organic Compounds From a Combined Dual Port Injection/Direct-Injection Technology Light-Duty Gasoline Vehicle	Robert Fanick and Svitlana Kroll, Southwest Research Institute
16:20	2019-24-0052	Solid Nucleation Mode Engine Exhaust Particles Detection at High Temperatures with an Advanced Half Mini DMA	Penelope Baltzopoulou, Anastasios D. Melas, Nickolas Vlachos, Danis Deloglou, Eleni Papaioannou and Athanasios G. Konstandopoulos, CERTH/CPERI
16:40	oral only	Update on SUREAL-23 Project: Understanding and Measuring Sub-23 nm Particle Emissions from Direct Injection Engines	Eleni Papaioannou, Dimitrios Zarvalis, Penelope Baltzopoulou, Leonidas Chasapidis, Anastasios D. Melas, Danis Deloglou, EMMANOUIL DASKALOS, Athanasios Konstandopoulos, CERTH/CPERI; Stephane Zinola, IFP Energies nouvelles, Institut Carnot IFPEN TE; Mickael Leblanc, IFP Energies nouvelles; Giovanna Nicol, C.R.F. S.C.p.A.; Bianca Maria Vaglieco, Silvana Di Iorio, Istituto Motori CNR; Martin Fierz, Heinz Burtscher, FHNW
17:00	oral only	Periodic Inspection of Particle Emissions from Vehicles	Heinz Burtscher, FHNW; Andreas Mayer, TTM; Thomas Lutz, ETHZ
17:20	oral only	Sponsor Presentation tbd	Stefano Somaschi Luchsinger

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ICENA601 - Advanced Hybrid and Electric Vehicle Powertrains			
11:10	2019-24-0063	Modelling and control of a novel clutchless multiple-speed transmission for electric vehicles	Ludovica Malafronte, University of Salerno; Mauro Grandone, Alberto Lega and Michele Pennese, Mecaprom SRL; Cesare Pianese, University of Salerno
11:30	2019-24-0064	A comprehensive hybrid vehicle model for energetic analyses on different powertrain architectures	Davide Cervone, Bernardo Sessa, Ivan Arsie, Cesare Pianese and Pierpaolo Polverino, Università degli Studi di Salerno
11:50	2019-24-0194	A Mild Hybrid SIDI Turbo Passenger Car Engine with Rankine Waste Heat Recovery	Fredrik B. Ekström, Ola Rolandson, Soren Eriksson, Christer Odenmarck, Mattias Svensson, Andreas Eriksson and Hans Olsen, Volvo Car Corporation
12:10	2019-24-0195	Synergistic effect of millerization, electric supercharging and 48V mild hybrid system	Heechang Oh, Jonghyeok Lee, Seungwoo Hong and Donghee Han, Hyundai Motor Company; Hanyong Park, Jongsuk Lim and Dowan Kim, Continental Automotive Systems
12:30	2019-24-0196	Hybrid Powertrain Calibration Techniques	Ernst Winkhofer, Alois Hirsch, Harald Philipp, Michael Trifterer and Manuel Berglez, AVL LIST GmbH
12:50	2019-24-0197	Design of a hybrid power unit for Formula SAE application: packaging optimization and thermomechanical design of the electric motor case	Valerio Mangeruga, Matteo Giacomini, Saverio Giulio Barbieri and Fabio Berni, University of Modena and Reggio Emilia; Enrico Mattarelli and Carlo Rinaldini, Università di Modena e Reggio Emilia
13:10	2019-24-0198	Hybrid Powertrain Technology Assessment Through an Integrated Simulation Approach	Joshua Dalby and Fabien Fiquet, Ricardo UK, Ltd.; Andrew Ward, Ricardo UK Ltd; Harald Stoffels, Ford Werke GmbH; Richard Burke, Univ of Bath; Naroa Zaldua-Moreno, Continental; Matthias Neveling, Schaeffler; Yang Liu, University Of Bath; Lorenzo Pace, Continental
13:30		Lunch break	
14:30		The path to CO2-neutral mobility in 2050-Marc Sens, IAV (Germany) / Chairperson: Zoran Filipi	
15:10		Coffee break	
ICENA604 - Range Extending Engines			
15:40	2019-24-0066	One-Dimensional Modeling of a Thermochemical Recuperation Scheme for Improving Spark-Ignition Range Extender Engine Efficiency	William F. Northrop, Univ. of Minnesota-Twin Cities; Darrick Zaring, Univ of Minnesota-Twin Cities
ICENA601 - Advanced Hybrid and Electric Vehicle Powertrains			
16:00	2019-24-0199	Simultaneous Optimization of Real-Time Control Strategies and Powertrain Design for Fuel Cell Hybrid Vehicles	Marco Sorrentino and Dario Capaldo, University of Salerno, Italy
16:20	2019-24-0200	Development of a hybrid power unit for Formula SAE application: ICE CFD-1D optimization and vehicle lap simulation	Enrico Mattarelli, Carlo Alberto Rinaldini, Francesco Scignoli and Valerio Mangeruga, UNIMORE
16:40	2019-24-0201	The Methane Fuel based Turbocharged Direct Injection Engine in a Hybrid Powertrain – An Efficient Synergy	Harald Stoffels and Carsten Weber, Ford-Werke GmbH; Friedrich Graf, Stefan Lauer and Jan Ehrhard, Continental Powertrain; Manuel Moretti, LuK GmbH & Co. KG; Matthias Neveling, Schaeffler Technologies AG & Co. KG
17:00	2019-24-0202	Potential of Electrification Applied to Non-Road Diesel Engines	Enrico Mattarelli, Carlo Alberto Rinaldini and Francesco Scignoli, UNIMORE; Paolo Fregni and Simone Gaioli, Kohler Engines; Giovanni Franceschini and Davide Barater, UNIMORE
17:20	oral only	Experimental activities on a PEFC based powertrain for a hybrid electric minibus	Laura Andaloro, Giuseppe Napoli, Salvatore Micari, CNR ITAE; Petronilla Fragiaco, DIMEG, University of Calabria; Vincenzo Antonucci, CNR ITAE
17:40	oral only	An integrated approach for E-powertrains early validation	Marmorato Giulio, AVL Italy
18:00	oral only	Engine Concepts for Future Electrified Powertrains	Kapus AVL LIST GmbH

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9:20		TBD- David Schutt CEO of SAE Enterprise (USA) / Chairperson: Cesare Pianese	
10:00		Propulsion system for future mobility FCA view- Maria Grazia Lisbona, FCA group (Italy) / Chairperson: Bianca Maria Vaglieco	
10:40		Coffee break	
ICENA501 - CI & SI Engines Technology			
11:10	2019-24-0054	Validity of a Steady-State Friction Model for Determining CO2 Emissions in Transient Driving Cycles	Tobias Funk, Holger Ehnis and Reiner Kuenzel, MAHLE International GmbH; Michael Bargende, IVK, University of Stuttgart
11:30	2019-24-0055	Smart cylinder deactivation strategies to improve fuel economy and pollutant emissions for Diesel-powered applications	Mauro Scassa, FEV Italia SRL; Thomas Körfer, FEV Group GmbH; S Kevin Chen, John Fuerst and Matthew Younkins, Tula Technology Inc; Marco Nencioni and Shino George, FEV Italia SRL
11:50	2019-24-0169	Experimental Investigations on Engine-Out Emissions Sensitivity to Fuel Injection Pressure of a High-Performance DISI Single Cylinder Engine	Vincenzo Rossi, Nicola Silvestri and Massimo Medda, Ferrari S.p.A.
12:10	2019-24-0164	A Simplified Methodology for the Analysis of the Cylinder Liner Bore Distortion: Finite Element Analyses and Experimental Validations	Saverio Giulio Barbieri, Matteo Giacomini, Valerio Mangeruga and Luigi Bianco, University of Modena and Reggio Emilia; Luca Nicolò Mastrandrea PhD, Ferrari SpA
12:30	2019-24-0166	Improvement in Thermal Efficiency of a Diesel Engine by Homogenized Flame Distribution	Kenji Enya and Noboru Uchida, New Ace Inst. Co., Ltd.
12:50	2019-24-0167	Piston Bowl Geometry Effects on Combustion Development in a high-speed light-duty Diesel Engine	Federico Perini, University of Wisconsin-Madison; Stephen Busch and Kan Zha, Sandia National Laboratories; Rolf Reitz, University of Wisconsin-Madison; Eric Kurtz, Ford Motor Company
13:10	2019-24-0168	The Szorenyi Three-Chamber Rotary Engine concept	Peter King, Partner Rotary Engine Development Agency
13:30		Lunch break	
14:30		The path to CO2-neutral mobility in 2050-Marc Sens, IAV (Germany) / Chairperson: Zoran Filipi	
15:10		Coffee break	
ICENA502 - Engine NVH			
15:40	2019-24-0058	Imaging and Vibro-Acoustic Diagnostic Techniques Comparison for a GDI Fuel Injector	Luigi Allocca, Daniela Siano, Alessandro Montanaro and Maria Antonietta Panza, Istituto Motori CNR
16:00	2019-24-0059	FEM Reduced Modelling for the Vibrational Characterization of a Petrol Engine	Roberto Guglielmo Citarella, University of Salerno; Enrico Armentani, University of Naples; Venanzio Giannella, University of Salerno; Antonio Parente and Mauro Pirelli, FCA Italy S.p.A.
16:20	2019-24-0174	A simple approach for the estimation of the exhaust noise source at the valves	Antonio J. Torregrosa and Pablo Olmeda, CMT-Universitat Politècnica de València; Jean-luc Adam, Florent Morin and Maxime Dubarry, Renault SAS
16:40	oral only	Acoustic optimization of an IC Engine cylinder head cover for automotive application with numerical-experimental correlation	Enrico Armentani, Pellegrino Curcio, Antonio Ferrara
ICENA505 - Alternative Engine Architectures			
17:00	2019-24-0189	The Ultra Low Emissions Potential of the Recuperated Split Cycle Combustion System	Robert E. Morgan, Univ. of Brighton; Christopher Lenartowicz, Konstantina Vogiatzaki, Simon Harvey and David Kennaird, University Of Brighton; Nicholas Owen, Dolphin N2 Ltd; Rhys Pickett and Andrew Atkins, Ricardo UK Ltd
17:20	2019-24-0190	A practical Recuperated Split Cycle engine for low emissions and high efficiency	Nicholas Owen and Fabrizio Treccarichi, Dolphin N2 Ltd; Andrew Atkins and Anoop Selvaraj, Ricardo UK Ltd; David Barnes and Tanzi Besant, Hiflux Limited; Robert Morgan, Univ of Brighton

SALA A 17/09/2019			
9:00	Registration		
9:00	New Mobility, New Powertrains and the Role of the IC Engine-Michael Berube, DoE Vehicle Technologies Office (USA) Chairperson: Zoran Filipi		
9:40	Coffee break		
ICENA102 - Multi-Dimensional Engine Modeling			
10:10	2019-24-0006	CFD Analysis and Knock Prediction within the Crevices of Piston to Liner Fireland of a High Performance ICE	Angelo Rosetti, Corrado Iotti and Andrea Bedogni, Ferrari Gestione Sportiva; Giuseppe Cantore, Stefano Fontanesi and Fabio Berni, University of Modena e Reggio Emilia
10:30	2019-24-0007	Numerical Investigation of Methanol Ignition Sequence in an Optical PPC Engine with Multiple Injection Strategies	Mateusz Pucilowski and Hesameddin Fatehi, Lund University; Mehdi Jangi, Birmingham University; Sara Lonn, Alexios Matamis, Oivind Andersson, Mattias Richter and Xue-Song Bai, Lund University
10:50	2019-24-0008	Effect of Methane Number in a Diesel Engine Converted to Natural Gas Spark Ignition	Luca Ambrogi, Università degli Studi di Perugia; Jinlong Liu, West Virginia Univ; Michele Battistoni, Università degli Studi di Perugia; Cosmin Dumitrescu, West Virginia Univ.; Lorenzo Gasbarro, Università degli Studi di Perugia
11:10	2019-24-0009	Effects of In-Cylinder Flow Structures on Soot Formation and Oxidation in a Swirl-Supported Light-Duty Diesel Engine	Hesameddin Fatehi, Lund University; Håkan Persson, Volvo Cars Corporation; Tommaso Lucchini, Politecnico di Milano; Mattias Ljungqvist, Volvo Cars Corporation; Oivind Andersson, Lund University
11:30	2019-24-0010	Large Eddy Simulation of an Ignition Front in a Heavy Duty Partially Premixed Combustion Engine	Christian Ibrón, Lund Univ.; Hesameddin Fatehi, Mehdi Jangi and Xue-Song Bai, Lund University
11:50	2019-24-0011	A Computationally Efficient Progress Variable Approach for In-Cylinder Combustion and Emissions Simulations	Andrea Matrisciano, Chalmers Univ. of Technology, LOGE AB; Corinna Netzer and Adina Werner, Brandenburg Univ. of Technology; Anders Borg, LOGE AB; Lars Seidel, LOGE GmbH; Fabian Mauss, Brandenburg Univ. of Technology
12:10	2019-24-0012	Multi-Level Modeling of Real Syngas Combustion in a Spark Ignition Engine and Experimental Validation	Carmine Caputo, University of Rome "Tor Vergata"; Domenico Cirillo, C.M.D. S.p.A.; Michela Costa and Gabriele Di Blasio, CNR Istituto Motori; Maria Di Palma, University "Parthenope"; Daniele Piazzullo, CNR Istituto Motori; Milan Vujanović, University of Zagreb
12:30	2019-24-0087	Large Eddy Simulation of Ignition and Combustion Stability in a Lean SI Optical Access Engine	Jacopo Zembi, Francesco Mariani and Michele Battistoni, Università degli Studi di Perugia
13:10	Lunch break		
14:00	Automotive Emissions Control: Challenges from real world performance regulatory requirements Zissis Samaras, Aristotle University (Greece) /		
14:40	Coffee break		
ICENA101 - 0-D and 1-D Modeling and Numerics			
15:10	2019-24-0084	Modelling of a Spark Ignition Engine with Turbo-Generator for Energy Recovery	Fabio Arminio, NETCOM group -Napoli; Maria Cristina Cameretti, University of Napoli Federico II; Luigi De Simio and Sabato Iannaccone, Istituto Motori CNR - Napoli; Teodoro Terzo, University di Napoli Federico II
15:30	2019-24-0081	Experimental measurement of roughness data and evaluation of Greenwood/Tripp parameters for the elastohydrodynamic analysis of a conrod small-end/piston pin coupling.	Andrea Ferretti and Matteo Giacomini, University of Modena and Reggio Emilia; Daniele Dini, Imperial College London; Stefano Fantoni, Ducati Motor Holding S.P.A
15:50	2019-24-0083	Zero-Dimensional Heat Release Modeling Framework for Gasoline Compression-Ignition Engines with Multiple Injection Events	Michael Pamminger and Carrie Hall, Illinois Institute of Technology; Buyu Wang and Thomas Wallner, Argonne National Laboratory; M Rajkumar, Navistar Inc
16:10	2019-24-0080	Fuel Consumption and Pollutant Emission Optimization at Part and Full Load of a High-Performance V12 SI Engine by a 1D Model	Vincenzo De Bellis and Enrica Malfi, University of Naples Federico II; Diego Cacciatore, Automobili Lamborghini Spa; Antonio Aliperti, University of Naples Federico II; Luca Rizzi, Lamborghini Automobili Spa
16:30	2019-24-0085	A Process for a Fast Heat Release Prediction at Multiple Engine Speeds and Valve Timings in the Early Stage of Gasoline Engine Development	Christian Rota, Ricardo UK, Ltd. University of Brighton; Robert Morgan, University of Brighton; Richard Osborne, Ricardo UK Ltd; David Mason and Morgan Heikal, University of Brighton; Andrea Matrisciano, LOGE AB; Kenan Mustafa, Ricardo UK Ltd
16:50	oral only	Numerical Investigation of 48 V Electrification Potential in terms of Fuel Economy and Vehicle Performance for a Gasoline Passenger Car	Francesco Accurso, Alessandro Zanelli, Federico Mollo, Luciano Rolando, Politecnico di Torino

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ICENA303 - Alternative and Advanced Fuels			
10:10	2019-24-0038	Combustion and Emission Characteristics of a Compression Ignition Engine Fueled with Diesel-LPG Blends	Renato Marialto, Istituto motori - CNR; Luigi Sequino and Gabriele Di Blasio, Istituto Motori CNR; Massimo Cardone, Universita di Napoli; Carlo Beatrice and Roberto Ianniello, Istituto Motori CNR; Gustavo Fontana, Universita di Cassino
10:30	2019-24-0039	Emissions Optimization Potential of a Diesel Engine Running on HVO: A Combined Experimental and Simulation Investigation	Dimitriadis Athanasios, Centre for Research & Technology Hellas (CERTH); Dimaratos Athanasios and Doulgeris Stylianos, Aristotle University of Thessaloniki; Bezergianni Stella, Centre for Research & Technology Hellas (CERTH); Zisis Samaras, Aristotle University of Thessaloniki
10:50	2019-24-0040	Biogenous Ethanol: CO2 Savings and Operation in a Dual-Fuel Designed Diesel Engine	Aleksandar Aleksandrov Damyanov and Peter Hofmann, Vienna University of Technology
11:10	2019-24-0137	Performance and Emissions of an Ammonia-Fueled SI Engine with Hydrogen Enrichment	Charles Lhuillier, Université D'Orleans; Pierre BREQUIGNY, Université D'Orleans; Francesco Contino, Vrije Universiteit Brussel; Christine Rousselle, Université D'Orleans
11:30	2019-24-0138	Experimental investigation of combustion timing of HVO, RME and diesel fuel in a Euro6 car engine during transient driving cycles	Martin Pechout and David Macoun, Czech University of Live Sciences
11:50	2019-24-0140	Characterization of Deposits Collected From a Plugged Fuel Filter	Botond Csontos, Hanna Bernemyr and Anders Christiansen Erlandsson, KTH Royal Institute of Technology; Oscar Forsberg, Mayte Pach and Henrik Hitting, Scania CV AB
13:10	Lunch break		
14:00	Automotive Emissions Control: Challenges from real world performance regulatory requirements Zisis Samaras, Aristotle University		
14:40	Coffee break		
ICENA202 - Mixing Controlled Combustion in CI Engines			
15:10	2019-24-0109	Numerical and Experimental Investigation into Brake Thermal Efficiency Optimum Heat Release Rate for a Diesel Engine	Noboru Uchida, New Ace Inst. Co., Ltd.; Jeremy GALPIN, IFP Energies Nouvelles; Kazumasa Watanabe and Kenji Enya, New Ace Inst. Co., Ltd.; Jean-Marc Zaccardi and Florence Duffour, IFP Energies Nouvelles
15:30	2019-24-0110	Compression Ratio and Intake Air Temperature Effect on the Fuel Flexibility of Compression Ignition Engine	Abdullah S. AlRamadan, Moez Ben Houidi, Bassam S. E. Aljohani, Hassan Eid and Bengt Johansson, King Abdullah Univ of Science & Tech.
15:50	2019-24-0111	Balancing Hydraulic Flow and Fuel Injection Parameters for Low Emission and High-Efficiency Automotive Diesel Engines	Gabriele Di Blasio, Carlo Beatrice and Roberto Ianniello, Istituto Motori CNR; Francesco Concetto Pesce, Alberto Vassallo and Giacomo Belgiorno, General Motors; Giovanni Avolio, Continental
16:10	oral only	Experimental Investigation of the Combustion Characteristics and Performance of a Heavy-Duty Ethanol-Diesel Direct Injection Engine	Nicola Giramondi, Anders Christiansen Erlandsson, KTH Royal Institute of Technology; Anders Jäger, Scania CV AB
ICENA104 - Engine Management and Control			
16:30	2019-24-0013	Potential of 1D Thermo-Fluid Dynamic Modeling in Reducing the Experimental Effort through the comparison of the achievable calibration performance	Francesco de Nola Ing, Teoresi Spa; Giovanni Giardiello and Alfredo Gimelli, Universita di Napoli Federico II; Andrea Molteni, Teoresi Spa; Massimiliano Muccillo, Universita di Napoli Federico II; Roberto Tortora Ing, Teoresi Spa
16:50	2019-24-0014	Quantification of Linear Approximation Error for Model Predictive Control of Spark Ignited Turbocharged Engines	Rohit Koli, Daniel Egan, Qilun Zhu and Robert Prucka, Clemson University
17:10	2019-24-0015	Experimental Validation of a Model-based Water Injection Combustion Control System for On-board Application	Francesco Ranuzzi, Nicolo Cavina, Guido Scocozza and Alessandro Brusa, University of Bologna; Matteo De Cesare, MAGNETI MARELLI SpA - Driveline Division
17:30	2019-24-0016	Learning based MPC control of combustion timing in Multi-Cylinder Partially Premixed Combustion Engine	Xiufei Li, Lianhao Yin, Per Tunestal and Rolf Johansson, Lund University
17:50	2019-24-0017	Cylinder Pressure Based Method for In-Cycle Pilot Misfire Detection	Carlos Jorques Moreno and Ola Stenlaas, Scania CV AB; Per Tunestal, Lund University

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ICENA201 - Combustion In Spark Ignition Engines			
10:10	2019-24-0018	Experimental and numerical analysis of a pre-chamber turbulent jet ignition combustion system	Elia Distaso, Riccardo Amirante and Egidio Cassone, Politecnico di Bari; Francesco Catapano, Istituto Motori CNR; Pietro De Palma, Politecnico di Bari; Paolo Sementa, Istituto Motori CNR; Paolo Tamburrano PhD, Politecnico di Bari
10:30	2019-24-0102	Analysis of Water Injection Strategies to Exploit the Thermodynamic Effects of Water in Gasoline Engines by Means of a 3D-CFD Virtual Test Bench	Antonino Vacca and Michael Bargende, IVK - University of Stuttgart; Marco Chiodi, FKFS Stuttgart; Tim Franken and Corinna Netzer, Brandenburg Univ of Technology; Maike Sophie Gern and Malte Kauf, Technische Universität Berlin; André Casal Kulzer, Porsche AG
10:50	2019-24-0103	Fuel-Lubricant Interactions on the Propensity for Stochastic Pre-Ignition	Derek Splitter, Brian Kaul and James Szybist, Oak Ridge National Laboratory; Lake Speed, Driven Racing Oil; Bradley Zigler and Jon Luecke, National Renewable Energy Laboratory
11:10	2019-24-0104	Ultra-Lean Pre-Chamber Gasoline Engine for Future Hybrid Powertrains	David Serrano and Jean-Marc Zaccardi, IFP Energies nouvelles, Institut Carnot IFPEN TE; Christoph Müller, RWTH Aachen University; Cedric Libert, Renault S.A.; Knut Habermann, FEV Europe GmbH
ICENA501 - CI & SI Engines Technology			
11:30	2019-24-0056	Study of Friction Optimization Potential for Lubrication Circuits of Light-duty Diesel Engines	Salvatore Mafri, Francesco Barba and Mauro Mattis, General Motors
11:50	2019-24-0170	Experimental Investigation of a Fuelled Prechamber combustion in an Optical Small Displacement SI Methane Engine	Paolo Sementa, Francesco Catapano, SILVANA Di Iorio and Bianca Maria Vaglieco, Istituto Motori CNR
12:10	2019-24-0171	Possibilities of Wall Heat Transfer Measurements at a Supercharged Euro IV Heavy-Duty Diesel Engine with High EGR-Rates, an In-cylinder Peak Pressure of 250 bar and an Injection Pressure up to 2500 bar	Christian HENNES and Jürgen Lehmann, Daimler AG; Thomas Koch, KIT Karlsruhe Institute Of Technology
12:30	2019-24-0172	Thermal Efficiency Comparison of Different Injector Constellations in a CI Engine	Gustav Nyrenstedt, King Abdullah Univ. of Science & Tech.; Kazumasa Watanabe and Kenji Enya, New Ace Inst Co Ltd; Hao Shi, King Abdullah Univ. of Science & Tech.; Noboru Uchida, New Ace Inst Co Ltd; Bengt Johansson, King Abdullah Univ of Science & Tech
12:50	2019-24-0173	Water Injection Contribution to Enabling Stoichiometric Air-to-Fuel Ratio Operation at Rated Power Conditions of a High-Performance DISI Single Cylinder Engine	Stefano Paltrinieri, Fabio Mortellaro and Nicola Silvestri, Ferrari SpA; Luciano Rolando, Politecnico di Torino; Massimo Medda and Daire Corrigan, Ferrari SpA
13:10	Lunch break		
14:00	Automotive Emissions Control: Challenges from real world performance regulatory requirements Zissis Samaras, Aristotle University (Greece) /		
14:40	Coffee break		
ICENA103 - Combustion and Flow Diagnostics			
15:10	2019-24-0099	In-Cylinder Flow Measurements in a Transparent Spark Ignition Engine	Vasileios D. Tsiogkas; Anastasios Chraniotis, Dimitrios Kolokotronis and Antonios Tourlidakis, University of Western Macedonia
15:30	2019-24-0100	PIV and DBI Experimental Characterization of Air flow-Spray Interaction and Soot Formation in a Single Cylinder Optical Diesel Engine using a Real Bowl Geometry Piston	Jose V. Pastor, Antonio Garcia, Carlos Micó and Felipe Lewiski, Universitat Politècnica de Valencia; Alberto Vassallo, GM Global Propulsion Systems; Francesco Concetto Pesce, General Motors Italia S.r.l.
ICENA504 - Engine Boosting Systems			
15:50	2019-24-0061	A Comprehensive Study on BSVI Turbocharger Selection and its Deterioration with Closed Crank-Case Ventilation in Heavy Commercial Vehicles	Aravind Mohan, VE Commercial Vehicles Ltd; Juzer Jaliwala, VE Commercial Vehicle Ltd; Kunaal Bhagat, VE Commercial Vehicles Ltd; Kumar Patchappalam, VE Commercial Vehicles, Ltd.
16:10	2019-24-0184	Inner-Insulated Turbocharger Technology to Reduce Emissions and Fuel Consumption from Modern Engines	Richard Burke, Yang Liu and Ramkumar Vijayakumar, University of Bath; Jürgen Werner, BorgWarner Turbo Systems; Joshua Dalby, Ricardo UK Ltd
16:30	2019-24-0185	Axial Flow Turbine Concept for Conventional and E-Turbocharging	Alessandro Cappiello, Raffaele Tuccillo and Maria Cristina Cameretti, Università di Napoli Federico II; Apostolos Pesyridis, Brunel University
16:50	2019-24-0186	Incipient Surge Detection in Automotive Turbocharger Compressors	Silvia Marelli, Paolo Silvestri, Vittorio Usai and Massimo Capobianco, Università degli Studi di Genova
17:10	2019-24-0187	Development and Application of a Quasi-3D Model for the Simulation of Radial Compressors of Turbochargers for Internal Combustion Engines	Gianluca Montenegro, Matteo Tamborski, Augusto Della Torre, Angelo Onorati and Andrea Marinoni, Politecnico di Milano; Silvia Marelli, Università degli Studi di Genova
17:30	2019-24-0188	Evaluation of Hybrid Electric Turbocharging for Medium Speed Engines	B.T.W. Mestemaker and J.A. Westhoeve, Royal IHC; K. Visser, Delft University of Technology

SALA D 17/09/2019			
9:00		Registration	
9:00		New Mobility, New Powertrains and the Role of the IC Engine-Michael Berube, DoE Vehicle Technologies Office (USA) Chairperson: Zoran Filipi	
9:40		Coffee break	
ICENA401 - Exhaust Emission Control Systems			
10:10	2019-24-0045	Experimental Tests on the Feasibility of Passive Regeneration in a Catalytic DPF at the Exhaust of a Light-Duty Diesel Engine	Bruno Rossomando, Universita Degli Studi Di Salerno; Ivan Arsie, Universita di Salerno; Eugenio Meloni, Univ. Of Salerno; Vincenzo Palma and Cesare Pianese, Universita di Salerno
10:30	2019-24-0046	Back-Pressure and Fuel Type Effects on Exhaust Gas Oxygen Sensor Readings for a Single Cylinder Spark Ignition Engine Running on Gasoline and Ethanol	Adrian Irimescu, Istituto Motori CNR
10:50	2019-24-0142	Experimental and Numerical Analysis of Latest Generation Diesel Aftertreatment Systems	Francesco Sapio, Federico Millo, Debora Fino, Alessandro Monteverde and Enrico Sartoretti, Politecnico di Torino; Andrea Bianco, Powertech Engineering SRL; Lucio Postrioti, Universita degli Studi di Perugia; Alessio Tarabocchia, Cornaglia SpA; Giacomo Buitoni and Gabriele Brizi, STSE s r l
11:10	2019-24-0143	Optimization of the Exhaust Aftertreatment System of a Heavy Duty Engine by means of Variable Valve Timing	Marius Betz and Peter Eilts, Technische Universität Braunschweig
11:30	2019-24-0144	Reduction of NOx in a Single Cylinder Diesel Engine Emissions Using Selective Non-Catalytic Reduction (SNCR) with In-Cylinder Injection of Aqueous Urea	Anthony Timpanaro and John Nuskowski, Univ of North Florida
11:50	2019-24-0145	Diesel Vehicle with Ultra-low NOx Emissions on the Road	Joachim Demuynck, Cecile Favre and Dirk Bosteels, AECC; Frank Bunar, Joachim Spitta and Andreas Kuhrt, IAV
12:10	2019-24-0146	Strive for Zero Emission Impact from Hybrid Vehicles	Mats Laurell, Volvo Car Corporation; Lorenzo Pace, Continental; Fredrik Ekström, Volvo Car Corporation; Katrin konieczny, Continental
ICENA405 - Low Temperature Catalysis			
12:30	2019-24-0162	Analysis of TWC Operation Characteristics in a Euro6 Gasoline Light Duty Vehicle	Viola Papetti and Panayotis Dimopoulos Eggenschwiler, Empa; Vasiliki Emmanouil, Exothermia SA; Grigorios Koltsakis, Aristotle University Thessaloniki
12:50	2019-24-0163	Heat Transfer Characterization of Catalytic Converter Substrates During Warm-Up	Viola Papetti and Panayotis Dimopoulos Eggenschwiler, Empa; Augusto Della Torre, Gianluca Montenegro and Angelo Onorati, Politecnico di Milano; Grigorios Koltsakis, Aristotle University Thessaloniki
13:10		Lunch break	
14:00		Automotive Emissions Control: Challenges from real world performance regulatory requirements Zissis Samaras, Aristotle University (Greece) / Chairperson:	
14:40		Coffee break	
ICENA402 - Emission Control Modeling			
15:10	2019-24-0047	Development of Three Way Catalyst (TWC) ageing model: application of real driving emission condition	Julie Le Louvetel-Poilly, Shankar balaji and Francois Lafossas, Toyota Motor Europe NV/SA
15:30	2019-24-0048	Multidimensional Modeling of SCR Systems via the Lattice Boltzmann Method	Vesselin Krastev, University of Rome Tor Vergata; Giovanni Di Ilio, University of Rome Niccolò Cusano; Gino Bella, University of Rome Tor Vergata; Stefano Ubertini, University of Tuscia; Giacomo Falcucci, University of Rome Tor Vergata
15:50	2019-24-0049	A New Take on Porous Medium Approach for Modelling Monoliths and Other Multiple Channel Devices	Gianluca Padula, Jonathan Saul, Svetlana Aleksandrova, Humberto Medina and Stephen Benjamin, Coventry University
16:10	2019-24-0147	A Novel 1D Co-Simulation Framework for the Prediction of Tailpipe Emissions Under Different IC Engine Operating Conditions	Tarcisio Cerri, Gianluca D'Errico, Gianluca Montenegro and Angelo Onorati, Politecnico di Milano; Grigorios Koltsakis and Zissis Samaras, Aristotle University of Thessaloniki; Konstantinos Michos, Vasileios Tziolas and Nikolaos Zingopis, Exothermia; Panayotis Dimopoulos Eggenschwiler, Viola Papetti, Jakub Rojewski PhD and Patrik Soltic, EMPA
16:30	2019-24-0148	Exhaust Purification Performance Enhancement by Early Activation of Three Way Catalysts for Gasoline Engines Used in Hybrid Electric Vehicles	Toshinori Okajima, Ryota Sone, Xieyang Yan, Ryoya Inoue, Suchitra Sivakumar, Hajime Shingyouchi, Jin Kusaka and Kyohei Yamaguchi, Waseda University; Makoto Nagata, NE Chemcat Corporation
16:50	2019-24-0149	Experimental and Computational Investigation of Particle Filtration Mechanisms in Partially Damaged DPFs	Onoufriou Haralampous, Marios Mastrokalos, Fotini Tzorbatzoglou and Chris Dritselis, University of Thessaly
17:10	2019-24-0150	Analysis and Modeling of NOx Reduction Based on the Reactivity of Cu Active Sites and Brønsted Acid Sites in a Cu-Chabazite SCR Catalyst	Yoshihisa Tsukamoto, TAKAO FUKUMA and Jin Kusaka, Waseda Univ
17:30	2019-24-0151	Pressure Drop of Particulate Filters and Correlation with the Deposited Soot for Heavy-Duty Engines	Ourania Voutsis and Dimitrios Tsinoglou, FPT Industrial; Dimitrios Karamitros and Grigorios Koltsakis, Aristotle University Thessaloniki
17:50	oral only	Holistic virtual calibration approach to reduce vehicle and engine testing on a Heavy Duty off-highway stage V programme.	Rindone Gianfranco Ricardo UK, Ltd.

SALA A 18/09/2019			
8:30	Registration		
8:30	The Engine Imperative-Fabien Redon, Achates Power (USA)		
ICENA102 - Multi-Dimensional Engine Modeling			
9:20	2019-24-0088	Validation of Diesel Combustion Models with Turbulence Chemistry Interaction and Detailed Kinetics	Qiyang Zhou, Tommaso Lucchini and Gianluca D'Errico, Politecnico di Milano; Gilles Hardy, FPT Motorenforschung AG
9:40	2019-24-0090	Virtual Investigation of Real Fuels by Means of 3D-CFD Engine Simulations	Francesco Cupo and Marco Chiodi, FKFS; Michael Bargende, Universitat Stuttgart; Daniel Koch and Georg Wachtmeister, Technical Univ of Munich; Donatus Wichelhaus, Volkswagen AG
10:00	2019-24-0091	Validation and Analysis of Heat Losses Prediction Using Conjugate Heat Transfer Simulation for an Internal Combustion Engine	Alberto Broatch, CMT- Universitat Politècnica de València; Xandra Margot, Jorge Garcia-Tiscar and Johan Escalona, CMT-Universitat Politècnica de València
10:20	2019-24-0092	The Effect of Post Injection Coupled with Extremely High Injection Pressure on Combustion Process and Emission Formation in an Off-Road Diesel Engine: a Numerical and Experimental Investigation	Federico Millo, Andrea Piano, Benedetta Peiretti Paradisi, Giulio Boccardo and Mohsen Mirzaeian, Politecnico di Torino; Luigi Arnone and Stefano Manelli, Kohler Engines
10:40	2019-24-0093	Integrated CFD-Experimental Methodology for the Study of a Dual Fuel Heavy Duty Diesel Engine	Maria Cristina Cameretti, Roberta De Robbio and Raffaele Tuccillo, University of Napoli Federico II; Vinicius Pedrozo and Hua Zhao, Brunel University London
11:00	Coffee break		
ICENA102 - Multi-Dimensional Engine Modeling			
11:30	2019-24-0094	Numerical Simulation of Syngas Blends Combustion in a Research Single-Cylinder Engine	Valentina Pessina and Alessandro D'Adamo, Università di Modena e Reggio Emilia; Clara Iacovano, Università degli Studi di Modena; Stefano Fontanesi, Università di Modena e Reggio Emilia; Santiago Martinez, Universidad de La Republica; Pedro Lacava, Instituto Tecnológico de Aeronautica
11:50	2019-24-0095	CFD Modeling of Gas Exchange, Fuel-Air Mixing and Combustion in Gasoline Direct-Injection Engines	Tommaso Lucchini, Gianluca D'Errico, Davide Paredi, Lorenzo Sforza and Angelo Onorati, Politecnico di Milano
12:10	2019-24-0096	Development and Validation of SI Combustion Models for Natural-Gas Heavy-Duty Engines	Lorenzo Sforza, Tommaso Lucchini, Giovanni Gianetti and Gianluca D'Errico, Politecnico di Milano
12:30	2019-24-0097	Effects of the Domain Zonal Decomposition on the Hybrid URANS/LES Modeling of the TCC-III Motored Engine Flow	Vesselin Krastev, University of Rome Tor Vergata; Alessandro D'Adamo, Federico Rulli and Stefano Fontanesi, Università di Modena e Reggio Emilia
12:50	2019-24-0098	A Coupled Tabulated Kinetics and Flame Propagation Model for the Simulation of Fumigated Medium Speed Dual-Fuel Engines	Gilles Decan, Ghent University; Tommaso Lucchini and Gianluca D'Errico, Politecnico di Milano; Sebastian Verhelst, Lund University
13:10	Lunch break		
14:00	to be defined		
14:40	Coffee break		
ICENA404 - Particle Emissions from Combustion Sources			
15:10	2019-24-0053	Chemical and Physical Characterization of Organic Particulate Matter from Last Generation Exhaust Aftertreatment System of Medium Duty Diesel Engine	Ezio Mancaruso and Bianca Maria Vaglieco, Istituto Motori-CNR; Wolfgang Gstrein and Konstantinos Priftis, FPT Motorenforschung AG; Antonio Tregrossi, Carmela Russo, Anna Ciajolo and Barbara Apicella, Istituto Ricerche Sulla Combustion
15:30	2019-24-0159	Sub-23 nm Particulate Emissions from a Highly Boosted GDI Engine	David Robert Emberson, Norwegian Univ of Science and Technology; Behzad Rohani, Brunel University London; Liang Wang PhD, SINTEF; Ragnhild Sæterli PhD and Terese Lovas, Norwegian Univ of Science and Technology
15:50	2019-24-0160	A sampling and conditioning particle system for solid particle measurements down to 10 nm	Toni Tahtouh, Arij Ben Amara, Patricia Anselmi and Laurie Starck, IFP Energies Nouvelles, France
16:10	2019-24-0161	Analysis of the Effect of the Sampling Conditions on the Sub-23nm Particles Emitted by a Small Displacement PFI and DI SI Engines Fuelled with Gasoline and Ethanol	Panagiotis Maniatis, Daniel Erforth, Uwe Wagner and Thomas Koch, KIT - Karlsruhe Institute of Technology
16:30	oral only	Source apportionment of the quasi-ultrafine particle number (PN) concentration near the Amsterdam Airport - Schiphol (AMS) using positive matrix factorization (PMF)	Milad Pirhadi, Mohammad sowlat, Amirhosein mousavi, University of Southern California; Flemming Cassee, National Institute for Public Health
16:50	oral only	Development of a Burner-Based Test System to Produce Controllable Particulate Emissions for Evaluation of Gasoline Particulate Filters	THAKRAL NISHANT, Southwest Research Institute-United States, Vinay Premnath, Scott Eakle, Imad Khalek, Southwest Research Institute

SALA B 18/09/2019			
8:30		Registration	
8:30		The Engine Imperative-Fabien Redon, Achates Power (USA)	
ICENA302 - Fuel Injection and Sprays: Experiments			
9:20	2019-24-0133	Optical Investigation of Mixture Formation in a Small Bore DISI Engine by Laser Induced Exciplex Fluorescence (LIEF)	Alexander Pauls and Peter Eilts, Technische Univ. Braunschweig
9:40	2019-24-0134	Optical evaluation of directly injected methane using a newly developed highly repetitive laser diagnostics system	Mirko Geiger, Lukas Schroeder, Christian Zoellner and Dieter Brueggemann, Bayreuth Engine Research Center; Juergen Goldluecke Ing, Goldluecke GmbH; Matthias Resch, InnoLas Laser GmbH
10:00	2019-24-0135	Experimental Characterization of Methane Direct Injection From an Outward-Opening Poppet-Valve Injector	Maurizio Lazzaro, Francesco Catapano and Paolo Sementa, Istituto Motori CNR
10:20	2019-24-0136	In Situ Injection Rate Measurement to Study Single and Split Injections in a Heavy-Duty Diesel Engine	Bassam S. E. Aljohani, Moez Ben Houidi, Rafiq Babayev, Khalid Aljohani and Bengt Johansson, King Abdullah University of Science & Te
10:40	oral only	High-speed imaging of a vaporizing GDI spray: a comparison between Shadowgraph, DBI and Scattering	Maurizio Lazzaro, Istituto Motori CNR
11:00		Coffee break	
ICENA302 - Fuel Injection and Sprays: Experiments			
11:30	2019-24-0034	Effects of Droplet Behaviors on Fuel Adhesion of Flat Wall Impinging Spray injected by a DISI Injector	Hongliang LUO, Youichi Ogata and Keiya Nishida, Hiroshima University
11:50	2019-24-0035	Experimental High Temperature Analysis of a Low-Pressure Diesel Spray for DPF Regeneration	Lucio Postrioti and Gabriele Brizi, Universita degli Studi di Perugia; Nic Van Vuuren, Continental Automotive Systems US Inc
12:10	2019-24-0036	Dynamic Thermal Behavior of a GDI Spray Impacting on a Heated Thin Foil by Phase-Averaged Infrared Thermography	Mattia Contino, University of Naples Federico II; Luigi Allocca and Alessandro Montanaro, Istituto Motori CNR; Gennaro Cardone and Mirko Zaccara, University of Naples Federico II
12:30	2019-24-0132	1D Modeling of Alternative Fuels Spray in a Compression Ignition Engine using Injection Rate Shaping Strategy	Ezio Mancaruso, Istituto Motori CNR; Carmela Perozziello, Univ.di Napoli Parthenope, Ist.Mot.CNR; Luigi Sequino, Istituto Motori CNR
13:10		Lunch break	
14:00		to be defined	
14:40		Coffee break	
ICENA101 - 0-D and 1-D Modeling and Numerics			
15:10	2019-24-0078	Set-up and Validation of an Integrated Engine Thermal Model in GT-SUITE for Heat Rejection Prediction	Eduardo Graziano, Luigi Bruno and Paolo Corrado, POWERTECH Engineering S.r.l.; Steven Pierson and Giuseppe Virelli, Jaguar Land Rover Limited
15:30	2019-24-0079	A New Co-Simulation Approach for Tolerance Analysis on Vehicle Propulsion Subsystem	Mancuso Claudio GM Global Propulsion Systems Italy
15:50	2019-24-0082	Heavy Duty Diesel Engine and EAS Modelling and Validation for a Hardware-in-the-Loop Simulation System	Antonio Riccio, Felice Di Iorio and Fabio Siccardi, Kohler Engines; Daniele Severi and Gabriele Lucchetti, AVL Italia SRL; Alexander Karlon and Plamen Valchev, AVL LIST GmbH
ICENA304 - Automotive Lubricants			
16:10	2019-24-0042	Morphological Characterisation of Gasoline Soot-in-Oil: Development of Semi-Automated 2D-TEM and Comparison with Novel High-Throughput 3D-TEM	Ephraim Haffner-Staton, Antonino La Rocca, Alasdair Cairns and Michael Fay, University of Nottingham
16:30	2019-24-0141	Experimental Investigation on the Use of Argon to Improve FMEP Determination Through Motoring Method	Carl Caruana and Mario Farrugia, Univ of Malta; Gilbert Sammut, Jaguar & Land Rover; Emiliano Pipitone, Universita degli Studi di Palermo

SALA C 18/09/2019			
8:30		Registration	
8:30		The Engine Imperative-Fabien Redon, Achates Power (USA)	
ICENA602 - Controls for Hybrids and Electric Powertrains			
9:20	2019-24-0203	Energetic Costs of ICE Starts in PHEV – Experimental Evaluation and its Influence on Optimization Based Energy Management Strategies	Lukas Engbroks, Pascal Knappe, Daniel Goerke, Stefan Schmedler and Tobias Goedecke, Daimler AG; Bernhard Geringer, Vienna University of Technology
9:40	2019-24-0204	Efficiency Prediction for Optimal Load Point Determination of Internal Combustion Engines in Hybrid Drives	Bastian Beyfuss, Peter Hofmann and Bernhard Geringer, Vienna University of Technology
10:00	2019-24-0205	Fuel-optimal Power Split and Gear Selection Strategies for a Hybrid Electric Vehicle	Johannes Ritzmann, Andreas Christon, Mauro Salazar and Christopher Onder, ETH Zurich
10:20	2019-24-0206	Optimal Engine Re-Start Strategy on a Mild Hybrid Powertrain by Means of Up-Front Modelling	Harald Stoffels, Shan-An Kao and Michael Frenken, Ford Werke GmbH
11:00		Coffee break	
ICENA201 - Combustion In Spark Ignition Engines			
11:30	2019-24-0019	Evaluation of Water and EGR Effects on Combustion Characteristics of GDI Engines Using a Chemical Kinetics Approach	Giulio Cazzoli, Gian Marco Bianchi, Stefania Falfari and Matteo Ricci, University of Bologna; Claudio Forte, NAIS
11:50	2019-24-0020	Computational Chemistry Consortium: surrogate fuel mechanism development, pollutants submechanisms and components library	Matteo Pelucchi, Politecnico di Milano; Liming Cai, RWTH Aachen Univ; Warumporn Pejpichestakul, Politecnico di Milano; Rupali Tripathi, RWTH Aachen Univ; Scott Wagnon, Lawrence Livermore National Lab; Kuiwen Zhang and Mandhapati Raju, Convergent Science Inc.; Marco Mehl and Tiziano Faravelli, Politecnico di Milano; William Pitz, Lawrence Livermore National Lab; Heinz Pitsch, RWTH Aachen Univ; Henry Curran, National University of Ireland Galway; Peter Kelly Senecal, Convergent Science Inc
12:10	2019-24-0021	Impact of cooled EGR on performance and emissions of a turbocharged Spark-Ignition engine under low-full load conditions	Luca Marchitto, Cinzia Tornatore and Gerardo Valentino, Istituto Motori CNR; Luigi Teodosio, University of Naples
12:30	2019-24-0022	Potential to Reduce Nano-Particle Emission in SG-DISI Engine with Normal Butane	Sangjae Park, Sanguk Lee, Yonghyun Na and Choongsik Bae, Korea Advanced Inst of Science & Tech
12:50	2019-24-0101	Experimental Analysis of the Influence of Water Injection Strategies on DISI Engine Particle Emissions	Maïke Sophie Gern, Technische Universität Berlin; Antonino Vacca and Michael Bargende, IVK - University of Stuttgart
13:10		Lunch break	
14:00		to be defined	
14:40		Coffee break	
ICENA301 - Fuel Injection and Sprays: Modeling			
15:10	2019-24-0031	Nozzle Flow and Spray Development One-way Coupling Methodology for a Multi-Hole GDI Injector	Navid Shahangian and Leila Sharifian, Toyota Motor Europe NV/SA; Jun Miyagawa, Toyota Motor Corp; Stefano Bergamini, AKKA; Kazuhiro Uehara and Yasushi Noguchi, Toyota Motor Corp; Pedro Marti-Aldaravi, María Martínez and Raul Payri, Universitat Politecnica de Valencia
15:30	2019-24-0033	Predictive CFD auto-tuning approach for in-cylinder EU6 LDD DI engine	Daniel Nsikane, University of Brighton, Ricardo UK, Ltd.; Konstantina Vogiatzaki and Robert Morgan, University of Brighton; Kenan Mustafa and Andy Ward, Ricardo UK Ltd
15:50	2019-24-0126	Exploration of Cavitation-suppressing Orifice Designs for a Heavy-duty Diesel Injector Operating with Straight-Run Gasoline	Roberto Torelli, Gina M. Magnotti and Sibendu Som, Argonne National Laboratory; Yuanjiang Pei and Michael L. Traver, Aramco Research Center - Detroit
16:10	2019-24-0127	Effects of the LES-mode SGS viscosity formulation on the hybrid URANS/LES modeling of turbulent fuel sprays	Giovanni Di Ilio, University of Rome Niccolò Cusano; Vesselin Krastev and Gino Bella, University of Rome Tor Vergata
16:30	2019-24-0128	Development of a CFD Solver For Primary Diesel Jet Atomization in FOAM-Extend	Vuko Vukcevic and Robert Keser, University of Zagreb; Hrvoje Jasak, Wikki, Ltd.; Michele Battistoni, Università degli Studi di Perugia; Hong Im, King Abdullah Univ of Science & Tech; Johan Roenby, University of Aalborg
16:50	2019-24-0129	Investigation of the Ignition Process of Pilot Injections Using 3D CFD	Christophe Barro and Omar Seddik, ETH Zurich; Yuri M. Wright, ETH Zurich/Combustion+FlowSolutions GmbH; Sushant Pandurangi, ETH Zurich; Panagiotis Kyrtatos, Vir2sense GmbH; Konstantinos Boulouchos, ETH Zurich
17:10	2019-24-0130	CFD Modeling and Validation of the ECN Spray G Experiment Under a Wide Range of Operating Conditions	Marianna Migliaccio and Alessandro Montanaro, Istituto Motori CNR; Davide Paredi and Tommaso Lucchini, Politecnico di Milano; Luigi Allocca, Istituto Motori CNR; Gianluca D'Errico, Politecnico di Milano
17:30	2019-24-0131	Large Eddy Simulations and Tracer-LIF Diagnostics of wall film dynamics in an optically accessible GDI research engine	Nicolò Frapolli and Konstantinos Boulouchos, ETH Zurich; Yuri M. Wright, ETH Zurich/Combustion+FlowSolutions GmbH; Jan N. Geiler and Andreas Manz, Robert Bosch GmbH; Sebastian A. Kaiser, U. of Duisburg-Essen
17:50	Oral Only	Gasoline Spray Models Calibration Under Diesel Engine Like Conditions	BLACODON Yohan Dr BLACODON France

SALA D 18/09/2019			
8:30	Registration		
8:30	The Engine Imperative-Fabien Redon, Achates Power (USA)		
ICENA203 - LTC/HCCI/PCCI/RCCI			
9:20	2019-24-0023	Experimental and numerical investigation of the maximum pressure rise rate for an LTC concept in a single cylinder CI engine	Metin Korkmaz, RWTH Aachen Univ.; Raghavan Lakshmanan, Tobias Falkenstein, Joachim Beeckmann and Heinz Pitsch, RWTH Aachen Univ
9:40	2019-24-0024	HCCI with Wet Ethanol: Investigating the Charge Cooling Effect of a High Latent Heat of Vaporization Fuel	Brian Gainey, James Gohn, Ziming Yan, Khurram Malik, Mozghan Rahimi Boldaji and Benjamin Lawler, Stony Brook Univ.
10:00	2019-24-0025	Study of fuel octane sensitivity effects on gasoline partially premixed combustion using optical diagnostics	Hao Shi, Yanzhao An and Bengt Johansson, King Abdullah Univ of Science & Tech
10:20	2019-24-0026	On the HCCI Octane Boosting Effects of γ -Valerolactone	Jean-Baptiste Masurier, Binod Giri, Gani Issayev, Bengt Johansson and Aamir Farooq PhD, King Abdullah Univ. of Science & Tech.
10:40	2019-24-0027	A Review of Spark-Assisted Compression Ignition (SACI) Research in the Context of Realizing a Production SACI Strategy	Dennis Robertson and Robert Prucka, Clemson University
11:00	Coffee break		
ICENA203 - LTC/HCCI/PCCI/RCCI			
11:30	2019-24-0028	Optical Diagnostics Investigation on the Effect of Fuel Injection Timing on Partially Premixed Combustion Stratification and Soot Formation in a Single-Cylinder Optical Compression Ignition Engine	Dimitrios P. Touloupis, George Vourliotakis, Christos Keramiotis, Kumara Gurubaran Ramaswamy, Yannis Hardalupas and Alexander Taylor, Imperial College London
11:50	2019-24-0029	Optimization of Multi Stage Direct Injection-PSCCI Engines	Annarita Viggiano and Vinicio Magi, Università degli Studi della Basilicata
12:10	2019-24-0112	Injection Pattern Investigation for Gasoline Partially Premixed Combustion Analysis	Federico Stola, Magneti Marelli SpA - Powertrain; Vittorio Ravaglioli, Giacomo Silvagni and Fabrizio Ponti, University of Bologna; Matteo De Cesare, Magneti Marelli SpA - Powertrain
12:30	2019-24-0113	A Mixing Timescale Model for PDF Simulations of LTC Combustion Process in Internal Combustion Engines	fadila Maroteaux, University of Versailles Saint Quentin; Ezio Mancaruso and Bianca Maria Vaglieco, Istituto Motori CNR
12:50	2019-24-0114	Sensitivity Analysis of the Combustion Parameters in a Stratified HCCI Engine with Regard to Performance and Emission	Mohsen Pourfallah, Mazandaran university of science and tec; mahboud Armin
13:10	Lunch break		
14:00	to be defined		
14:40	Coffee break		
ICENA204 - Combustion in Gaseous-Fueled Engines			
15:10	2019-24-0030	Heavy-Duty Compression-Ignition Engines Retrofitted to Spark-Ignition Operation Fueled with Natural Gas	Lorenzo Gasbarro, Università degli Studi di Perugia; Jinlong Liu, Cosmin Dumitrescu and Christopher Ulishney, West Virginia Univ; Michele Battistoni and Luca Ambrogi, Università degli Studi di Perugia
15:30	2019-24-0120	Literature Review on dual-fuel combustion modelling	Menno Merts and Sebastian Verhelst, Lund University
15:50	2019-24-0121	Emissive Behavior of a Heavy-Duty SI Gas Engine During WHTC	Chiara Guido, Valentina Fraioli, Pierpaolo Napolitano, Salvatore Alfuso and Carlo Beatrice, Istituto Motori CNR
16:10	2019-24-0122	Experimental and Numerical Analysis of a Dual Fuel Operation of Turbocharged Engine at Mid-High Load	Darko Kozarac, Univ. of Zagreb; Mladen Bozic, Ante Vucetic, Josip Krajnovic and Momir Sjeric, Univ of Zagreb
16:30	2019-24-0123	A Fundamental Study on Combustion Characteristics in a Pre-Chamber Type Lean Burn Natural Gas Engine	Masashi Tanamura, Shintaro Nakai, Mahoko Nakatsuka, Shota Taki, Kohei Ozawa, Beini Zhou, Ratnak Sok, Yasuhiro Daisho and Jin Kusaka, Waseda University
16:50	2019-24-0124	Experimental Investigation of Combustion Characteristics in a Heavy-Duty Compression-Ignition Engine Retrofitted to Natural-Gas Spark-Ignition Operation	Jinlong Liu, West Virginia Univ; Cosmin Dumitrescu, West Virginia Univ.

SALA A 19/09/2019			
9:00	The Porsche high efficient Drive Train, Donatus Wichelhaus- Race Engine DevelopmentPorsche (Germany)		
ICENA506 - Enabling Technologies			
9:50	2019-24-0062	Experimental Evaluation of Novel Thermal Barrier Coatings in a Single Cylinder Light Duty Diesel Engine.	Joop Somhorst, Volvo Car Corporation; Wellington Uczak De Goes, University West; Michael Oevermann, Chalmers Technical University; Mirko Bovo, Volvo Car Corporation
10:10	2019-24-0191	A Proposed Diesel Powertrain to Meet Future Emission Standards and Achieve High Engine Efficiency	Konstantinos Priftis, Apostolos Karvountzis Kontakiotis, Wolfgang Gstrein PhD and Christoph Schuette, FPT Motorenforschung AG
10:30	2019-24-0192	Efficient Test Bench Operation with Early Damage Detection Systems	Thomas Laible and Stefan Pischinger, RWTH Aachen University; Matthias Pouch and Carsten Küpper, BEA Testing GmbH
10:50	2019-24-0193	Optical Sensor for the Needle Lift Detection in the Common Rail Injector	C Coratella, L. Parry, A. Sahu and H. Xu, The University of Birmingham, UK
ICENA605 - Energy Storage			
11:10	2019-24-0207	A Coupled Lattice Boltzmann-Finite Volume Method for the Thermal Transient Modeling of an Air-Cooled Li-ion Battery Module for Electric Vehicles	Daniele Chiappini and Laura Tribioli, Univ. di Roma Niccolo Cusano; Gino Bella, Univ. Tor Vergata
11:30	oral only	Predictive Thermal-Electrochemical Battery Modeling for Optimization of EV Thermal Management	GAMMA TECHNOLOGIES Fabio Valesano
12:00	Concluding remarks		

SALA B 19/09/2019			
9:00	The Porsche high efficient Drive Train, Donatus Wichelhaus- Race Engine DevelopmentPorsche (Germany)		
ICENA201 - Combustion In Spark Ignition Engines			
9:50	2019-24-0105	Experimental Studies of Gasoline Auxiliary Fuelled Turbulent Jet Igniter at Different Speeds in Single Cylinder Engine	Khalifa Isa Bureshaid, Brunel University; Dengquan Feng, University in Tianjin; Michael Bunce, Mahle Powertrain Ltd; Hua Zhao, Brunel University
10:10	2019-24-0106	A Study on Combustion Characteristics of a High Compression Ratio SI Engine with High Pressure Gasoline Injection	Takashi Kaminaga, Kyohei Yamaguchi, Sok Ratnak and Jin Kusaka, Waseda Univ; Takashi Youso, Tatsuya Fujikawa and Masahisa Yamakawa, Mazda Motor Corp
10:30	2019-24-0107	A Study of Lean Burn Pre-chamber Concept in a Heavy Duty Engine	Ponnya Hlaing, Manuel Echeverri Marquez and Vijai Shankar Bhavani Shankar, King Abdullah Univ of Science & Tech; Emre Cenker, Saudi Aramco; Moez Ben Houidi and Bengt Johansson, King Abdullah Univ of Science & Tech
10:50	2019-24-0108	Knock and Pre-Ignition Limits on Utilization of Ethanol in Octane-on-Demand Concept	Eshan Singh, King Abdullah Univ. of Science & Tech.; Kai Morganti, Saudi Aramco; Robert Dibble, King Abdullah Univ. of Science & Tech.
ICENA - 205 Abnormal Combustion and Cyclic Dispersion			
11:10	2019-24-0125	Development of a Predictive Model for Knock Intensity in a Spark-Ignition Engine with Gasoline-Ethanol-nButanol Blend Fuel by Using Rapid Compression Machine	Jaeyoung Cho and Han Ho Song, Seoul National Univ. South Korea
12:00	Concluding remarks		

SALA C 19/09/2019

SALA C 19/09/2019			
9:00	The Porsche high efficient Drive Train, Donatus Wichelhaus- Race Engine DevelopmentPorsche (Germany)		
ICENA503 - Thermal Management			
9:50	2019-24-0060	Inverted Brayton Cycle as an Option for Waste Energy Recovery in Turbocharged Diesel Engine	Davide Di Battista, Roberto Cipollone PhD and Roberto Carapellucci PhD, Universita degli Studi dell Aquila
10:10	2019-24-0177	Friction Reduction by Optimization of Local Oil Temperatures	Oemer Oezdemir, University of Kassel; Kevin Huttinger and Michael Bargende, University of Stuttgart; Adrian Rienäcker, University of Kassel
10:30	2019-24-0179	CFD Modeling of Compact Heat Exchangers for I.C. Engine Oil Cooling	Augusto Della Torre, Gianluca Montenegro and Angelo Onorati, Politecnico di Milano; Sumit Khadiikar, UFI Innovation Center; Roberto Icarelli, UFI Filters
10:50	2019-24-0182	Temperature Measurements of the Piston surface in a Research Compression Ignition Engine in Transient Conditions for 1d Model of Heat Transfer	Ezio Mancaruso, Luigi Sequino and Bianca Maria Vaglieco, Istituto Motori CNR
11:10	2019-24-0183	Knock Mitigation by Means of Coolant Control	Diego Perrone, Luigi Falbo, Teresa Castiglione and Sergio Bova, Università della Calabria
12:00	Concluding remarks		

SALA D 19/09/2019			
9:00	The Porsche high efficient Drive Train, Donatus Wichelhaus- Race Engine Development Porsche (Germany)		
ICENA203 - LTC/HCCI/PCCI/RCCI			
9:50	2019-24-0115	Dual-Fuel Ethanol-Diesel Technology Applied in Mild and Full Hybrid Powertrains	Jesus Benajes, Antonio Garcia, Javier Monsalve-Serrano and Santiago Martinez, Universitat Politecnica de Valencia
10:10	2019-24-0116	Influence of Injection Strategies on Engine Efficiency for a Methanol PPC Engine	Erik Svensson, Martin Tuner and Sebastian Verhelst, Lund University
10:30	2019-24-0117	A Study of Flow Characteristics on the Diesel-Gasoline Dual-Fuel Combustion by 3-D CFD	Sunyoung Moon, Sanghyun Chu, Taewoo Nam and Kyoungdoug Min Seoul National Univ.
10:50	2019-24-0118	Experimental Assessment of Ozone Addition Potential in Direct Injection Compression Ignition Engines	Michele Bardi, Guillaume Pilla and Mickaël Matrat, IFP Energies nouvelles-Institut Carnot
11:10	2019-24-0119	Oxy-Fuel HCCI Combustion in a CFR Engine with Carbon Dioxide as a Thermal Buffer	Abdulrahman Mohammed, King Abdullah Univ. of Science & Tech.; JEAN-BAPTISTE MASURIER, Ali Elkhazraji and Bengt Johansson, King Abdullah Univ of Science & Tech
11:30	Oral Only	Assessment of the Hydraulic Flow and Fuel Injection Parameters Effects in RCCI Dual-Fuel Combustion mode on Light and Heavy-Duty Engines	Michael Saccullo, Chalmers Univ. of Technology; Carlo Beatrice, Istituto Motori CNR; Gabriele Di Blasio; Ingemar Denbratt, Chalmers Univ of Technology
12:00	Concluding remarks		