

PROGRAMME 12 JUNE 2019

07:30 > ATTENDEES REGISTRATION & COFFEE IN THE EXHIBITION

OPENING PLENARY SESSION

08:30 >	Welcome Introduction Jacques GRAIZON, President - <i>Société des Ingénieurs de l'Automobile</i>
08:35 >	Opening address by the Conference Chairmen Philippe BERNET - <i>Groupe Renault</i> // Jochen LANGHEIM - <i>STMicroelectronics</i> // Erwann SAMSON - <i>Groupe PSA</i>
08:40 >	The Energy mix and its impact on multiple automotive topics Jean-Luc BROSSARD, R&D Director - <i>PFA - French Automotive Industry & Mobilities</i>
09:05 >	Fluid for Energy Transition Gérald CREPEAU, President - <i>GFC - French Coordination Group</i>
09:30 >	EV Ecosystem Bertrand LARGY, Chairman of SIA Experts' Community on Electric Vehicle & Electric Ecosystem
09:55 >	New mobility services
10:20 >	Q&A session

10:45 > COFFEE BREAK IN THE EXHIBITION // DEMO-CARS SHOWCASE & TEST-DRIVE

	ICE for HEV Nadim ANDRAOS, FEV & Noureddine GUERRASSI, DELPHI Technologies	HIGH EFFICIENCY COMBUSTION #1 Virginie MOREL, ARAMCO & Marc SENS, IAV	BATTERY Olivier IMBERDIS, IAV & Kyoungdoug MIN, Seoul National University	MARKET AND END-USERS IN POWER ELECTRONICS Jochen LANGHEIM, STMicroelectronics & Kimimori HAMADA, APE Japan
11:30 >	Contribution of Electrified Gasoline Engine Technology to CO₂ Reduction Philippe SOUHAITE - <i>Groupe PSA</i>	Fuel Formulations Based on RON Synergistic Effects for Better Fuel Economy and Lower CO₂ Emissions Roland DAUPHIN - <i>Total</i>	Modular battery pack development for PHEV to EV applications Gaël CHOUCHELA-MANE - <i>RICARDO</i>	Automotive Power Modules: Market & Technology trends Elena BARBARINI - <i>System Plus</i> & Claire TROADEC - <i>Yole Développement</i>
12:00 >	HMC's Powertrain development approach to High Efficiency Gasoline Engine with Thermal Efficiency over 44% Youngnam KIM - <i>Hyundai Motor Company</i>	The influence of fuel pressure on emissions and efficiency with Delphi Technologies next generation GDi-System Gavin DOBER - <i>Delphi Technologies</i>	Design optimization of battery systems by multiphysics simulation David LASUEN & Björn POHLE - <i>IAV</i>	Use of SiC and GaN in automotive Olivier PLOIX - <i>Groupe Renault</i>
12:30 >	Modelling and Optimisation of Engine Restart Strategies on a mHEV Powertrain Shan-An KAO - <i>Ford</i>	Development of Knock Prediction Model for On-board Control in a Spark-Ignited Engine Seokwon CHO - <i>Seoul National University</i>	Computational Modelling of Thermal Runaway Propagation in Lithium-Ion Battery Systems Daniele SUZZI - <i>AVL</i>	Fuel Cell Powertrain architecture: dedicated power electronics? Christian MAUGY & Eric GIMET - <i>Groupe PSA</i>

13:00 > LUNCH BREAK IN THE EXHIBITION // DEMO-CARS SHOWCASE & TEST-DRIVE

	HIGH EFFICIENCY COMBUSTION #2 Denis LEVASSEUR, Groupe Renault & Philippe SOUHAITE, Groupe PSA	AFTERTREATMENT & REAL DRIVING Emmanuel JEAN, Faurecia & Joel OP DE BEECK, Plastic Omnium	HYBRID TRANSMISSIONS Philippe CHINA, Total & Omar HADDED, Drive System Design	ARCHITECTURES AND COMPONENTS IN POWER ELECTRONICS Olivier COPPIN, Faurecia & Olivier PLOIX, Groupe Renault
14:30 >	An extended method of partition of thermodynamic losses for a detailed evaluation of VVT potentials Wolfram GOTTSCHALK - <i>IAV</i>	Function Development for GPF calibration Frank GESCHNER - <i>IAV</i>	Hybrid Dual Clutch Transmission Control: Improved hybrid integration and transient management with non-sequenced DCT software architecture Saurabh KHAPE - <i>Drive System Design</i>	The next generation of electrified powertrains: smart digital systems engineering for safe and reliable products Christian GRAN-RATH - <i>RWTH Aachen University</i>
15:00 >	Swumble In-Cylinder Fluid Motion: a Pathway to High Efficiency Gasoline SI Engines Patricia ANSELMI - <i>IFPEN</i>	Aftertreatment Optimization through Electrical Heating Alain SASSI - <i>Faurecia</i>	RENAULT New Dedicated hybrid transmission for B and C segment Nicolas FREMAU - <i>Groupe Renault</i>	SiC Drive Inverter using Intelligent Gate Drivers and Embedded Current Sensing Niklas LANGMAACK - <i>TU Braunschweig</i>
15:30 >	Performance of the Passive Pre-chamber Ignition Concept in a Spark-Ignition engine for Passenger Car Applications Ricardo NOVELLA - <i>Universitat Politècnica de Valencia</i>	Thermo-management for real-driving emissions - a model-based variation study Thomas GLATZ - <i>AVL</i>	Hybrid solutions from fully integrated P2 systems to DHT Dierk REITZ - <i>Schaeffler</i>	Axial Flux Machines for HEV's Powertrain Study and Design Thomas BOUSSEY - <i>Valeo</i>
16:00 >	Effect of Spark Discharge Characteristics on Combustion Stability with Highly EGR Diluted SI Engine Operation Tatsuya KUBOYAMA - <i>Chiba University</i>	Electric Vehicle Power Consumption Comparison based on Vehicle Usage Behavior Gaël LE HEN - <i>Robert Bosch</i>	Right sizing and systematically development of future electric powertrains Erik SCHNEIDER - <i>IAV</i>	Improved winding head organization of hair pins for forced convection oil cooling in an electric engine Guy DIEMUNSCH - <i>Vedecom</i>
16:30 >	COFFEE BREAK IN THE EXHIBITION // DEMO-CARS SHOWCASE & TEST-DRIVE			
	PANEL DISCUSSION			
17:30 >	New energies and perspectives EVOLEN & SIA Experts' Community Electric Vehicle & Energy Ecosystem			
19:00 >	COCKTAIL DINNER IN THE EXHIBITION // DEMO-CARS SHOWCASE & TEST-DRIVE			
21:00 >	END OF THE FIRST DAY			

PROGRAMME 13 JUNE 2019

07:15 > WELCOME COFFEE IN THE EXHIBITION // DEMO-CARS SHOWCASE & TEST-DRIVE

	EGR & WATER INJECTION	THERMAL ENERGY RECOVERY E-TURBO	HYBRID POWERTRAINS	ELECTRICAL COMPONENTS IN POWER ELECTRONICS
	Federico MILLO, Politecnico di Torino & Daniel ROETTGER, Ford	Gaetan MONNIER, IFPEN & Rémy SCHMITT, Robert Bosch	Jean Marc BOULARD, AVL & Marc LEJEUNE, AB Volvo	Manuel GAERTNER, STMicroelectronics & Jean Michel MORELLE, Valeo
08:00 >	Effect of water injection configuration on single cylinder DISI engine efficiency and performances Matthieu CORDIER - IFPEN	Methodology for the Optimization of the Overall Efficiency of a Combined Cycle: Internal Combustion Engine Coupled to Steam Rankine Cycle on Series Hybrid Electric Vehicles Wissam BOU NADER - Groupe PSA	Decision making process by system engineering for future 48V powertrain topology Johannes MORITZ MAITERTH, RWTH Aachen University	Trends in Passives for Future Power Electronics Shinichiro NISHIZAWA - TDK
08:30 >	HYDROPOWER: Water Injection for gasoline passenger cars fit for all driving conditions Joël OP DE BEECK - Plastic Omnium	ORC turbo-pump-generator for heat recovery at low temperature in passenger cars Gaël LEVEQUE - ENOGIA	Hybrid Powertrains – Technology Sets for Best System Efficiency and Lowest Emissions Matthias THEWES, FEV	Analysis of Switching Performance in a GaN based EV charger Nikolas BAUER - BMW
09:00 >	Exhaust Gas Recirculation for small displacement SI Engines Christian VIGILD - Ford	Hybrid Petrol Advanced Combustion Engine Adrian COOPER - MAHLE Powertrain	48V High Power Electric Drive for Excellent CO ₂ emissions & Electric Driving Features Christophe MARECHAL, Continental	Right fit approach to power semiconductor selection in electrified vehicles Mark MUENZER - Infineon
09:30 >	Experimental investigation on integrated LP-EGR system for gasoline engine Mathieu CAPIRCHIA - Faurecia	Electric Turbo - A key technology to achieve Euro 7 Hybridized Powertrain Nathaniel BONTEMPS - Garrett-Advancing Motion	AVL's Low Voltage High Power Electric Axle System Thomas PELS - AVL LIST	Switched Reluctance Drives in Range Extender Applications Annegret KLEIN-HESSLING - ISEA - RWTH

10:00 > COFFEE BREAK IN THE EXHIBITION // DEMO-CARS SHOWCASE & TEST-DRIVE

PANEL SESSION

	ROUND TABLE Philippe BRUNET - SVP, Powertrain & EV Engineering - Alliance Renault Nissan Mitsubishi Matthias KRATZSCH - Managing Director of Technology - IAV
10:45 >	Prof. Helmut LIST - Chairman & CEO - AVL Alain RAPOSO - SVP, Powertrain, Battery & Chassis Engineering - Groupe PSA Stephan REBHAN - SVP, Powertrain Technology & Innovation - Continental Powertrain Uwe WAGNER - SVP, R&D Automotive OE & Industrial - Schaeffler

12:15 > STUDENTS' BEST POSTER AWARD CEREMONY!

12:30 > LUNCH BREAK IN THE EXHIBITION // DEMO-CARS SHOWCASE & TEST-DRIVE

	VARIABLE ICE SYSTEMS	COOLING & THERMAL MANAGEMENT	EMACHINE	PACKAGING FOR POWER ELECTRONICS
	Yasuo MORIYOSHI, CHIBA UNIVER-SITY & Amin VELJI, Karlsruhe Institute of Technology	Steffen MEYER, BorgWarner & Andy WARD, Ricardo	Geoffroy MARTIN, MoveO & Sébastien POTTEAU, EMC	Petra MONIUS, Continental & Gilles LE CALVEZ, Vedecom
13:45 >	Dynamic Skip Fire: Synergy with Future Propulsion Technologies Roland MILLEN - Tula Technology	Virtual Approach for Control System Design: Integrated Simulation of Battery Cooling and Cabin Comfort Circuits to Develop a BEV Thermal Management Control Logic Giulio BOCCARDO - POWERTECH Engineering	Towards high speed and high efficiency compact electric systems for future 48V automotive on board electricity generation Jean-Baptiste MICHEL & Misa MILOSAVLJEVIC - IFPEN	SiC MOSFETs: Key Enabler for the Market Evolution of the future e-Powertrain and its behavior under Short-Circuit Manuel GAERTNER - STMicroelectronics
14:15 >	Dual Mode VCS - Vehicle Integration of a Modular VCR-System Wolfgang SCHÖFF-MANN - AVL	xEV Thermal System Control Optimisation Peter FUSSEY - Ricardo	Reluctance Synchronous Electric Motor without magnets solution for e-mobility: a possible workflow for a quick and accurate design and optimization Emanuel CASTAGNARO - SPIN-Università di Padova	Benefits of GaN transistors and embedding laminate Cyril BUTTAY - INSA Lyon
14:45 >	RDE concept based on a fully variable valve train system Daniel WOLF - Schaeffler	New fluids for electric and hybrid vehicles Philippe CHINA - Total	Multi-objective optimization of electrical machines including NVH, energy and thermal considerations Sylvestre LECURU - Vibratec	The breakthrough in 48V interconnect technology and its roadmap to high voltage solutions Christian ROESSLE - Schweizer
	CLOSING SESSION Philippe BERNET, Groupe Renault, Jochen LANGHEIM, STMicroelectronics & Erwann SAMSON, Groupe PSA			
15:15 >	Toyota Electrified Vehicles Kyosuke MIYAGI, Group Manager EHV Electronics Design Division - Toyota			
15:15 >	Jaguar Land Rover Propulsion System Strategy - MHEV, PHEV, BEV Damien TALUE, Chief Engineer Powertrain - Jaguar Land Rover			
	Closing Remarks by the Conference Chair			
15:55 >	Philippe BERNET - Groupe Renault Jochen LANGHEIM - STMicroelectronics Erwann SAMSON - Groupe PSA			
16:10 >	END OF THE CONGRESS			