



Call for Paper

2023 JSAE/SAE

Powertrains, Energy and Lubricants International Meeting

Technical Challenges for

a Carbon Neutral Society by 2050

"Powertrains, Fuels and Lubricants International Meeting," the former name of this meeting, has been changed as above in Japan.

August 29 - September 1

2023 (Registration and Welcome Party on August 28)

Kyoto, JAPAN

Venue: KYOTO TERRSA

<https://2023pel.jp>



Call for Paper

Abstract of **300 words** with Session & Topic (Session Code: IC1, HV2, etc.) should be submitted to the JSAE website at: <https://2023pel.jp/submission/> (the JSAE website will be opened on August 1st, 2022)

Powertrains, Energy & Lubricants evolves from Powertrains, Fuels & Lubricants

Under the huge momentum of "carbon neutral (CN) by 2050" and powertrain electrification, it is essential, from a Well-to-Wheel perspective, to explore CN fuels for internal combustion engine-powered vehicles. It is also important to promote new synergy between powertrains and CASE, social systems such as MaaS.

Against this background, and with the aim of discussing a wide range of trends and the latest technologies intended to realize CN, "Powertrains, Fuels and Lubricants International Meeting" in Kyoto has been renamed "Powertrains, Energy and Lubricants International Meeting".

Keynote speeches (KS) and the Executive Panel Session (EPS) will inspire the participants to envision a future carbon neutral society from a broad, comprehensive perspective. The KS will cover topics from various global trends to realize a carbon neutral society by 2050, followed by the EPS where experts will discuss technological development in terms of four key elements needed to meet the demand by society for automobiles: "vehicle electrification", "internal combustion engines", "fuels and lubrications" and "zero impact emission" aimed at 2050.

Specific challenges we currently face will also be intensively discussed from an expert's point of view at technical workshops (TWS), helping to deepen and broaden participants' understanding.

Based both on a broad comprehensive perspective as well as detailed estimates, the meeting is intended to serve as a good opportunity for all of us to consider the future reality of automobiles, energy and society in a carbon neutral society.

40 Best Paper Award
Under forty Young Scientists Welcome!

KEY DATES

Abstract Submission Starts
August 1, 2022

Deadline of Abstract Submission
December 1, 2022

Deadline of Draft Manuscripts
March 1, 2023

Deadline of Final Papers
June 1, 2023

CONTACT

Secretariat
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Organized Sessions

OS	OS1	Application of Alternative Fuels Reducing CO ₂
	OS2	CO ₂ Reduction Technology for Carbon Neutral of ICE for Various Applications
	OS3	Advanced Aftertreatment Systems toward Zero-impact Emission

General Sessions

1. Reduction of Exhaust CO₂ and Other Emissions

1.1 ICE

IC	IC1	SI Injection and Combustion, High Efficiency, Optimization of Engine Operating Area
	IC2	CI Injection and Combustion, High Efficiency, Optimization of Engine Operating Area
IC	IC3	Fundamentals of Mixture Formation and Combustion
	IC4	Modeling, MBD, Engine Systems and Control
	IC5	Fuel Property Optimization

1.2 Hybridization

HV	HV1	Advanced Hybrid and Plug-In Hybrid Electric Vehicle Systems and Control
	HV2	Modeling, MBD for Hybrid and Plug-In Hybrid Electric Vehicles
	HV3	Advanced Thermal Management for Hybrid and Plug-In Hybrid Electric Vehicles

1.3 Emissions

EC	EC1	Testing and Emissions Measurement
	EC2	Advanced Aftertreatment
	EC3	Effects of Fuels and Lubricants for Automotive Devices

1.4 Tribology and Lubricants

TL	TL1	Power Cylinder Systems and Components
	TL2	Tribology
	TL3	Powertrain Lubricants, EV fluids
	TL4	Additives

1.5 Lightweighting

LW	LW1	Powertrain Materials
	LW2	Vehicle Construction, Powertrain Construction, Manufacturing

1.6 Social Systems

SS	SS1	City Planning, Traffic Control
	SS2	Vehicle to Home, Vehicle to Grid

2. CO₂ Free Energy

2.1 Electricity

EV	EV1	Advanced Battery Electric Vehicle Systems and Control
	EV2	Modeling, MBD for Battery Electric Vehicles
	EV3	Advanced Thermal Management for Battery Electric Vehicles
	EV4	Electricity Production

2.2 Hydrogen

HY	HY1	Advanced Fuel Cell Electric Vehicle Systems and Control
	HY1	Modeling, MBD for Fuel Cell Electric Vehicles
	HY3	Advanced Thermal Management for Fuel Cell Electric Vehicles
	HY4	Hydrogen Production
	HY5	H ₂ -ICE, Ammonia-ICE

2.3 Renewable Fuels

RF	RF1	Bio fuels, HVO
	RF2	Fuel Design, e-fuels (Liquid, gas)

3. Recycle/Reuse of CO₂ and Precious Metals

RR	RR1	DAC, CCS, CCUS
	RR2	Recycling Systems

4. Analysis

AN	AN1	LCA, WTW, TCO
	AN2	Strategies toward Zero CO ₂