

# ICE2025

17<sup>th</sup> International Conference on Engines & Vehicles for Sustainable Transport







September 14<sup>th</sup> - 17<sup>th</sup>, 2025 @ Capri, Naples

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ICE2025 is organized by <u>SAENA</u> (Italian SAE section) in cooperation with IFPEN (IFP Energies Nouvelles ) and with <u>STEMS</u> (Institute of Science and Technology in Energy and Sustainable Mobility - Naples, Italy).

**SAENA** is the first SAE International section in Italy and it cooperates with engineering schools to provide a link between education and industry. Its main mission is stimulating the technological and scientific progress in the fields of land, sea and airspace transportation.

**IFPEN** is a major research and training player in the fields of energy, transport and the environment. From research to industry, technological innovation is central to all its activities. Its areas of expertise include: climate, environment and circular economy, renewable energies, sustainable mobility, responsible oil and gas.

**STEMS** represents a research hub for sustainable energy and mobility issues with over one hundred researchers. ITS research activities are carried out with the aim of giving effective responses to the challenges related to climate, energy and mobility that are closely linked and must be addressed with a holistic approach, also with regard to their implications for citizens and in general for society as a whole.

#### **SUBMISSON PROCESS**

Prospective authors are invited to submit abstracts of 300 words or less for review by the General Committee. Abstracts will be <u>submitted on-line</u> and managed by the SAE International.

Upon, the paper tracking number will be sent by email.

Paper acceptance will be based on organizer moderated peer-reviews of review-ready manuscript. Authors should prepare their papers according to SAE International format.

For additional information, please contact ICE2025 Secretary by email and/or visit <u>SAENA website</u> and/or visit <u>ICE</u> <u>CONFERENCES</u> website.

#### **DEADLINES**

- 1) Submission of Abstracts February 12, 2025
- 2) Submission of Manuscripts March 14, 2025
- 3) Release Review Results to Authors (2 reviews complete) May 02, 2025
- 4) Approval of Technical Paper for Publication June 20, 2025
- **5) Final Manuscript Submission** July 01, 2025.

#### **CONFERENCE CHAIRS**

Bianca M. Vaglieco (STEMS) Gaetano De Paola (IFPEN)

#### **CONFERENCE ORGANIZERS**

Silvana Di Iorio (STEMS | SAENA) Ezio Mancaruso (STEMS | SAENA)









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#### **TOPICS OF THE CONFERENCE**

#### **ICE100**

#### **Powertrain System Modeling & Controls**

- ➤ 0-D and 1-D Modeling and Numerics
- Multi-Dimensional Engine Modeling
- Combustion and Flow Diagnostics
- ➤ Engine Management and Control

#### **ICE200**

#### **Engine Combustion**

- Combustion In Spark Ignition Engines
- ➤ Basic, Alternative Fuels & Abnormal Combustion
- ➤ Combustion In CI Engines: Basic & Alternative Fuel
- ➤ Homogenous Charge Partially, Premixed Compression Ignition & Dual-fueled Engines
- ➤ Combustion In Hydrogen Fueled Engines

#### **ICE300**

#### **Fuels And Lubricant Technologies**

- ➤ Fuel Injection and Sprays
- ➤ Alternative and Advanced Fuels
- > Automotive Lubricants

#### **ICE400**

#### **Mobile Emissions**

- Exhaust Emission Control: Systems New Developments and Modeling
- > Emissions Measurement and Testing
- > PM Non-exhaust Emissions
- **Emissions From Combustion Sources**

#### **ICE500**

#### **Advanced Powertrains**

- Advanced Hybrid and Electric (BEV) Vehicle Powertrains
- ➤ Hybrid Energy Management
- ➤ Range Extending Engines
- ➤ Energy Management and Control Strategies
- ➤ Hydrogen aend Fuel Cell Vehicle Applications

#### **ICE600**

#### **Advanced Vehicle Energy Management**

- ➤ Energy-Efficient Driver Assistance Systems (Eco-adas)
- ➤ Energy-Optimal Trip Planning
- ➤ Energy Savings Through Connectivity and Automation
- ➤ Integrated Vehicle/Powertrain Thermal Management
- ➤ AI and Machine Learning
- Physical, Virtual, and Mixed Methods for Advanced Vehicle Energy Management Testing

#### **ICE700**

#### **Electric Motors And Electronics Components**

- ➤ Innovative Electric Motors for Automotive
- ➤ New Materials for Next Generation Electric Motors
- ➤ Power Converter Topologies
- ➤ Modelling, Simulation and Design
- ➤ Thermal Management System
- > EMI/EMC in The Vehicle Environment
- ➤ Controls for Electric Powertrains
- ➤ Cost, LCA and Complementary Physics Integration
- ➤ Emotor and Power Electronics Aging and Reliability
- ➤ Powertrain Testing and Validation

#### ICE800

#### **Electrical Storage Systems (Batteries & Fuel Cells)**

- ➤ Modeling & Simulation
- > Thermal Management System
- ➤ Safety & Thermal Runaway
- ➤ Innovative Pack Design (CTP, Multi-chemistry Systems, New Chemistry Integration, Recyclability...)
- ➤ Life Cycle & Durability





