



June 12-13 - Politecnico di Torino

Parallel Session - Hydrogen for Sustainable Mobility: H2ICE&H2FC

- Fuel Cell Hybrid Electric Vehicles: the role of detailed modeling in optimal design during prototype development, **L. Bartolucci - Tor Vergata University of Rome**
- Direct Injection Hydrogen Combustion System for Mid-Duty Diesel Engines Retrofit, **D. Gessaroli - Dumarey**
- Exhaust After-Treatment Modeling Challenges for H2 Combustion Engines, **M. Zafeiridis - Gamma Technologies LLC**
- Assessment of the predictive capabilities of a combustion model for a direct-injection hydrogen-fuelled internal combustion engine for heavy-duty applications, **F. Pucillo - Politecnico di Torino**
- Development of a multi-zone 1D-CFD predictive combustion model for a diesel-H2 dual-fuel medium-speed engine, **G. Stanzione - Politecnico di Torino**
- Development of a Direct Injection Hydrogen Engine for off-road applications through numerical and experimental investigations, **F. Mallamo - FEV Italia**
- A Comprehensive Experimental Characterization of a DI Outward Opening Hydrogen Injector by Schlieren Imaging and Momentum Flux Distribution Maps, **L. Postriot - Università degli Studi di Perugia**
- Analysis and Visualization of Hydrogen Combustion in a Spark Ignition Optical Access Engine, **F. Ricci - Università degli Studi di Perugia**
- Experimental and Numerical Investigation of Abnormal Combustion Phenomena in a High-Performance Hydrogen Fueled DISI Engine operated in stoichiometric Conditions, **L. Rolando - Politecnico di Torino**
- Performance, Efficiency and NOx Emissions in A Sport Car H2 ICE, **F. Gullino - Ferrari Spa**
- Spectroscopy of Flame Kernel Inception During Ultra-Lean Operation of An Optically Accessible Spark Ignition Engine Fueled with Hydrogen, **S. S. Merola - CNR - STEMS**
- Model-Based Algorithm for Water Management Diagnosis and Control for PEMFC Systems for Motive Applications, **M. Sicilia - Università Degli Studi Di Salerno (Paper # 2024-37-0004)**
- The Potential of Hydrogen High Pressure Direct Injection Toward Future Emissions Compliance: Optimizing Engine-Out NOx and Thermal Efficiency, **R. Willems – TNO (Paper #2024-37-0005)**
- Advanced H2 ICE development aiming for full compatibility with classical engines while ensuring zero-impact tailpipe emissions, **T. Koerfer - FEV Group GmbH (Paper #2024-37-0006)**
- Assessing Heavy Duty Vehicle CO2 Emissions for Qualification as a Zero Emissions Vehicle, **D. K. Mumford - Westport Fuel Systems (Paper #2024-37-0007)**
- Guided Port Injection of Hydrogen as An Approach for Reducing Cylinder-To-Cylinder Deviations in Spark-Ignited H2 Engines – A Numerical Investigation, **P. E. Jung - RPTU University of Kaiserslautern-Landau (Paper #2024-37-0008)**
- 1D Modeling of a High-Performance Engine Fueled with H2 And Equipped with A Low NOx Aftertreatment Device, **G. Montenegro - Politecnico di Milano (Paper #2024-37-0009)**
- ANN-Based Modelling of Hydrogen Internal Combustion Engine for Model-in-the-Loop Applications and Development of a Dedicated Torque-Based Control Strategy, **P. P. Brancaleoni - University of Bologna**
- A New Generation of Hydrogen-Fueled Hybrid Propulsion Systems for The Decarbonization of Urban Public Transport, **F. Millo - Politecnico di Torino**