

## Scientific and academic curriculum vitae of Emiliano Pipitone

Emiliano Pipitone was born in Palermo the 8th of October 1973. Master degree in Mechanical Engineering, Associate Professor at the Department of Engineering of the University of Palermo, National Scientific Qualification as Full Professor in Fluid Machinery and Energy Systems.

He currently holds the course of “Machines” for the Mechanical Engineering bachelor's degree, and the course of “Internal Combustion Engines” for the Master's degree in Mechanical Engineering.

He is also head of the Internal Combustion Engine Laboratories of the Department, composed of three main benches: the CFR engine test bench, the flow test bench and the engine test bed, all equipped with proper and up-to-date scientific instrumentation.

He carried out experimental and theoretical researches on the optimal control strategies aimed to improve fuel economy and pollutant emissions in automotive engines, on the combustion diagnosis and phase control by means of in-cylinder pressure analysis, on the detection and measure of knocking phenomena, on the fluid dynamics of engine intake systems and on the turbulence induced in the combustion chamber, on engine modelling for performance prevision and optimization and for knock onset prediction, and on the use of gaseous fuels in spark ignition engines, experiencing the simultaneous combustion of gasoline and natural gas or gasoline and LPG, also in HCCI configuration.

He is author of 23 international peer-reviewed journal papers, and 29 national and international conference proceedings. (H-index is 12, Scopus database, February 2021).

### Academic office

- Member of the Scientific Committee of Department.
- Member of the Council of Department.
- Member of the Board of the PhD in Engineering of the Innovation Technology.
- Member of the Mechanical Engineering Degree Course.

### Research projects

- Scientific director of the project "TRIM – Technology and Research for the Industry of Marine mobility ", financed by the Italian Minister for University and Research (MIUR) within the programme National Technologic Cluster “Trasporti Italia 2020”.
- Scientific director of the multidisciplinary research project “DIT Dynamic Irreversible Thermoporation” financed by funds of the European Community under PO FESR 2007/13.
- Member of the Research Program of National Interest PRIN 2004 “Optimal use of CNG in spark ignition engine for the downsizing of low emissions automotive engine”.
- Contract researcher in the Research Program of National Interest PRIN 2000 “Thermo-fluid dynamic processes and techniques for pollutant emission reduction in IC engines”.
- Scientific director of four research projects financed by University of Palermo from 2004 to 2007.

- **Two additional research projects as a young researcher in the years 2000 and 2001, financed by University of Palermo.**

#### **Other**

- **Reviewer of the most relevant scientific journals in the field of energy and automotive engineer, such as SAE International Journal of Fuel and Lubricants, IMechE Journal of Automobile Engineering, Journal of the Energy Institute, ASME Journal of Engineering for Gas Turbines and Power, Environmental Science and Pollution Research, Sensors and actuators.**
- **Speaker at several national and international conferences.**
- **PhD thesis supervisor.**