

PERSONAL INFORMATION

Federico Millo



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🌐 www.polito.it/engines

Sex M | Date of birth 19/11/1964 | Nationality Italian

- Full Professor of Fluid Flow Machines and Energy Systems at Politecnico di Torino, (POLITO), Italy
- Coordinator of the Energetics PhD program of Politecnico di Torino
- Chairman of the Board of the SAE Torino Section
- Gen Ass Member of EARPA for POLITO

WORK EXPERIENCE

From 2016/03 to present

Full Professor

Fluid machinery, energy systems and power generation
Politecnico di Torino

From 1998/11 to 2016/02

Associate Professor

Fluid machinery, energy systems and power generation
Politecnico di Torino

From 1991/11 to 1998/10

Assistant Professor

Fluid machinery, energy systems and power generation
Politecnico di Torino

Main academic responsibilities

Since 1998 prof. Millo has been giving lectures in the MSc course Automotive Internal Combustion Engines and since 2004 in the Engine Emissions Control MSc course offered to mechanical and automotive engineering students.

He has supervised 500+ MSc student theses and 30+ PhD theses.

From 2018 to present

Coordinator of the Energetics PhD program at Politecnico di Torino

From 2013 to 2020

Coordinator for the Specializing Master “Energy Management for Powertrains” at Politecnico di Torino

From 2011 to 2020

Academic Coordinator of the IARE (*Institute for Automotive Research and Education*), a virtual Institute jointly established by General Motors and Politecnico di Torino

EDUCATION AND TRAINING

From 1983 to 1989

Master of Science
Mechanical Engineering
Politecnico di Torino

Languages

Mother tongue(s) Italian

Other language(s) English – professional user

ADDITIONAL INFORMATION

Competences	<p>The research activity of F. Millo has been entirely focused on internal combustion engines and on hybrid and electric propulsion systems, in particular on the analysis and on the diagnostic of the combustion process, on the use of alternative fuels, on pollutant emissions control in s.i. and diesel engines, on engine modelling and on the development of engine control strategies for conventional as well as for hybrid and electric powertrains.</p> <p>He has also contributed in 2000-2001 to the amendment to the Directive 97/68/EC on Calculation of gaseous emissions from non road SI engines, and then, in 2005-2006, within the UN ECE GRPE group, to the development of the "WHTC" (World Harmonized Transient Cycle), a transient engine dynamometer cycle for heavy-duty engines, now used for engine emission type approvals worldwide.</p>
Main research funded projects from competitive grants	<p>EU Projects</p> <p>2021-2024 EU HORIZON 2020 - PHOENICE - PHev towards zerO EmissioNs & ultimate ICE efficiency - Role: POLITO Research Unit (RU) Coordinator</p> <p>2012-2015 FP7 – ARTEMIS - Automotive pemfc Range extender with high TEMperature Improved meas and Stacks - Role: POLITO RU Coordinator</p> <p>National projects</p> <p>2022-2025 - PRIN 2020 - H2ICE: development of a hydrogen fueled hybrid powertrain for urban buses – Role: National Coordinator (coordinating a group of 5 Italian Universities)</p> <p>2022-2025 - H2 ICE -Development of a Hydrogen fuelled internal combustion engine - Role: POLITO Coordinator (5 RUs from 3 Depts.)</p> <p>2012-2013 - PRIN 2009 - Analysis of last generation biodiesel fuel blends effects on performance and emissions of automotive common rail small displacement diesel engines – Role: POLITO POLITO RU Coordinator</p> <p>2009-2010 - PRIN 2007 - Methodologies for the optimization of the combustion process in high-speed diesel engines running with diesel/biodiesel fuel mixtures – Role: POLITO RU Coordinator</p> <p>2005-2006 - PRIN 2004 - Methodologies for the optimization of multiple fuel injections in high-speed diesel engines – Role: POLITO RU Coordinator</p> <p>Regional Projects (EU FESR)</p> <p>2017-2020 - Development of a new generation of HEVs - Role: POLITO Coordinator (5 RUs from 3 Depts.)</p> <p>2017-2020 - CSS (Cylinder Set Strategy) - Role: POLITO Coordinator (5 RUs from 4 Depts.)</p> <p>2013-2015 Idea - Innovative Diesel engine applications - Role: POLITO Coordinator (10 RUs from 6 Depts.)</p> <p>2011-2013 AMPERE Development of an innovative hybrid propulsion system for urban buses - Role: POLITO Coordinator (4 RUs from 4 Depts.)</p> <p>2007-2010 SOFTECOP Sunflower raw Oil as a bio-Fuel TEchnology for Combined heat and Power plants: an application for district heating - Role: POLITO Coordinator (3 RUs from 2 Depts.)</p>
Coordination of research, technology transfer and projects	<p>F. Millo has been responsible and principal investigator, over the last 20 years, for more than 50 research projects with major automotive companies, such as Ferrari, FIAT, General Motors, Lamborghini, Magneti Marelli, managing a budget of more than 4 Million Euros and thus significantly contributing to funding both a substantial revamping of the experimental equipment of the Internal Combustion Engine Lab of the Energy Department of the Politecnico di Torino, and a remarkable number of PhD scholarships and Research Assistant positions.</p> <p>F. Millo is the coordinator and the founder of the e³ – Engines, Energy and Environment research group (http://www.polito.it/engines) at the Energy Department of the Politecnico di Torino, where he is currently heading a team made by 1 Associate Professor, 2 Assistant Professors, 2 post-doc and 12 PhD students, all with grants funded by industries or by public institutions.</p> <p>He has been also the scientific mentor of Powertech Engineering, a spin-off engineering consulting company of Politecnico di Torino, founded in 2007, which has now 30+ full time employees and an annual turnover of more than 2 million of Euro, with a wide portfolio of customers including primary OEMs such as Jaguar Land Rover, GM, Fiat, Renault, PSA, Hyundai.</p>
Awards	<p>Prof. Millo has been nominated SAE (Society of Automotive Engineers) Fellow in 2016, being the fifth Italian (and the only Italian member from the academia) to be elevated to the grade of Fellow since the award was established in 1975.</p> <p>Prof. Millo has been also the recipient of the SAE Forest R. McFarland Award in 2013.</p> <p>F. Millo's research on the development of innovative energy management strategies for HEVs was recognized by an award of the prestigious "Honda Initiation Grant Europe", as the best powertrain research project from a European University for 2011.</p>
Publications	<p>Prof. Millo has published over 150 articles, collecting about 2500 citations with an H index of 27</p> <p>Scopus Author Identifier: 24449746800 - Orcid: https://orcid.org/0000-0002-3540-5564</p>
Editorial work and conferences organization	<p>F. Millo is Associate Editor for Proceedings of the IMechE, Part D: Journal of Automobile Engineering and for the SAE International Journal of Engines.</p> <p>F. Millo has been serving as main organizer and chairman for a number of International Conferences among which:</p> <ul style="list-style-type: none"> • "Facing the Challenge of Future CO₂ Targets: Impact on European Passenger Car Technologies", 2009 • "TO ZEV: Highlighting the Latest Powertrain, Vehicle and Infomobility Technologies", 2011 • "The Convergence of Systems Towards Sustainable Mobility", 2012 • "CO₂ reduction for transportation systems", 2016, 2018, 2020, 2022