

# Pedro Piqueras

## List of Publications by Year in descending order

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67  
papers

1,251  
citations

394421

19  
h-index

477307

29  
g-index

68  
all docs

68  
docs citations

68  
times ranked

610  
citing authors

#	ARTICLE	IF	CITATIONS
1	A fluid dynamic model for unsteady compressible flow in wall-flow diesel particulate filters. Energy, 2011, 36, 671-684.	8.8	75
2	Filtration modelling in wall-flow particulate filters of low soot penetration thickness. Energy, 2016, 112, 883-898.	8.8	60
3	Pre-DPF water injection technique for pressure drop control in loaded wall-flow diesel particulate filters. Applied Energy, 2015, 140, 234-245.	10.1	52
4	Packed bed of spherical particles approach for pressure drop prediction in wall-flow DPFs (diesel) Tj ETQq0 0 0 rgBT/Overlock 10 Tf 50 6	8.8	49
5	Experimentalâ€“theoretical methodology for determination of inertial pressure drop distribution and pore structure properties in wall-flow diesel particulate filters (DPFs). Energy, 2011, 36, 6731-6744.	8.8	48
6	Methodology for characterisation and simulation of turbocharged diesel engines combustion during transient operation. Part 1: Data acquisition and post-processing. Applied Thermal Engineering, 2009, 29, 142-149.	6.0	46
7	Heat transfer modelling in honeycomb wall-flow diesel particulate filters. Energy, 2012, 43, 201-213.	8.8	45
8	Description of a Semi-Independent Time Discretization Methodology for a One-Dimensional Gas Dynamics Model. Journal of Engineering for Gas Turbines and Power, 2009, 131, .	1.1	42
9	Why the Development of Internal Combustion Engines Is Still Necessary to Fight against Global Climate Change from the Perspective of Transportation. Applied Sciences (Switzerland), 2019, 9, 4597.	2.5	42
10	Methodology for characterisation and simulation of turbocharged diesel engines combustion during transient operation. Part 2: Phenomenological combustion simulation. Applied Thermal Engineering, 2009, 29, 150-158.	6.0	41
11	Analysis of the role of altitude on diesel engine performance and emissions using an atmosphere simulator. International Journal of Engine Research, 2017, 18, 105-117.	2.3	30
12	Solution of the turbocompressor boundary condition for one-dimensional gas-dynamic codes. Mathematical and Computer Modelling, 2010, 52, 1288-1297.	2.0	29
13	Experimental and computational approach to the transient behaviour of wall-flow diesel particulate filters. Energy, 2017, 119, 887-900.	8.8	28
14	Experimental assessment of pre-turbo aftertreatment configurations in a single stage turbocharged diesel engine. Part 1: Steady-state operation. Energy, 2015, 80, 599-613.	8.8	26
15	Performance of a diesel oxidation catalyst under diesel-gasoline reactivity controlled compression ignition combustion conditions. Energy Conversion and Management, 2019, 196, 18-31.	9.2	26
16	Analysis of fluid-dynamic guidelines in diesel particulate filter sizing for fuel consumption reduction in post-turbo and pre-turbo placement. Applied Energy, 2014, 132, 507-523.	10.1	24
17	Turbine and exhaust ports thermal insulation impact on the engine efficiency and aftertreatment inlet temperature. Applied Energy, 2019, 240, 409-423.	10.1	23
18	Sizing a conventional diesel oxidation catalyst to be used for RCCI combustion under real driving conditions. Applied Thermal Engineering, 2018, 140, 62-72.	6.0	22

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19	Pollutants emission and particle behavior in a pre-turbo aftertreatment light-duty diesel engine. Energy, 2014, 66, 509-522.	8.8	21
20	Methodological analysis of variable geometry turbine technology impact on the performance of highly downsized spark-ignition engines. Energy, 2021, 215, 119122.	8.8	21
21	Derivation of the method of characteristics for the fluid dynamic solution of flow advection along porous wall channels. Applied Mathematical Modelling, 2012, 36, 3134-3152.	4.2	20
22	Development of an Integrated Virtual Engine Model to Simulate New Standard Testing Cycles. , 0, , .		20
23	Development and verification of an in-flow water condensation model for 3D-CFD simulations of humid air streams mixing. Computers and Fluids, 2018, 167, 158-165.	2.5	19
24	A modelling tool for engine and exhaust aftertreatment performance analysis in altitude operation. Results in Engineering, 2019, 4, 100054.	5.1	19
25	1D gas dynamic modelling of mass conservation in engine duct systems with thermal contact discontinuities. Mathematical and Computer Modelling, 2009, 49, 1078-1088.	2.0	18
26	Assessment by means of gas dynamic modelling of a pre-turbo diesel particulate filter configuration in a turbocharged HSDI diesel engine under full-load transient operation. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2011, 225, 1134-1155.	1.9	18
27	Model-based passive and active diagnostics strategies for diesel oxidation catalysts. Applied Thermal Engineering, 2017, 110, 962-971.	6.0	18
28	Internal pore diffusion and adsorption impact on the soot oxidation in wall-flow particulate filters. Energy, 2019, 179, 407-421.	8.8	18
29	On the impact of DPF downsizing and cellular geometry on filtration efficiency in pre- and post-turbine placement. Journal of Aerosol Science, 2017, 113, 20-35.	3.8	17
30	Description and Analysis of a One-Dimensional Gas-Dynamic Model With Independent Time Discretization. , 2008, , .		16
31	Lumped Approach for Flow-Through and Wall-Flow Monolithic Reactors Modelling for Real-Time Automotive Applications. , 0, , .		16
32	On the Impact of Particulate Matter Distribution on Pressure Drop of Wall-Flow Particulate Filters. Applied Sciences (Switzerland), 2017, 7, 234.	2.5	15
33	Experimental assessment of a pre-turbo aftertreatment configuration in a single stage turbocharged diesel engine. Part 2: Transient operation. Energy, 2015, 80, 614-627.	8.8	14
34	Impact on Reduction of Pollutant Emissions from Passenger Cars when Replacing Euro 4 with Euro 6d Diesel Engines Considering the Altitude Influence. Energies, 2019, 12, 1278.	3.1	14
35	Validation and sensitivity analysis of an in-flow water condensation model for 3D-CFD simulations of humid air streams mixing. International Journal of Thermal Sciences, 2019, 136, 410-419.	4.9	14
36	Analysis of the influence of pre-DPF water injection technique on pollutants emission. Energy, 2015, 89, 778-792.	8.8	13

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37	Simultaneous NOx and NH3 slip prediction in a SCR catalyst under real driving conditions including potential urea injection failures. International Journal of Engine Research, 2022, 23, 1213-1225.	2.3	13
38	High-frequency response of a calculation methodology for gas dynamics based on Independent Time Discretisation. Mathematical and Computer Modelling, 2009, 50, 812-822.	2.0	12
39	Influence of DPF Soot Loading on Engine Performance with a Pre-Turbo Aftertreatment Exhaust Line. , 2012, , .		12
40	Analysis of heavy-duty turbocharged diesel engine response under cold transient operation with a pre-turbo aftertreatment exhaust manifold configuration. International Journal of Engine Research, 2013, 14, 341-353.	2.3	12
41	Fuel efficiency optimisation based on boosting control of the particulate filter active regeneration at high driving altitude. Fuel, 2022, 319, 123734.	6.4	12
42	Performance Analysis of a Turbocharged Heavy Duty Diesel Engine with a Pre-turbo Diesel Particulate Filter Configuration. SAE International Journal of Engines, 0, 4, 2559-2575.	0.4	11
43	Late Fuel Post-Injection Influence on the Dynamics and Efficiency of Wall-Flow Particulate Filters Regeneration. Applied Sciences (Switzerland), 2019, 9, 5384.	2.5	11
44	Effect of the exhaust thermal insulation on the engine efficiency and the exhaust temperature under transient conditions. International Journal of Engine Research, 2021, 22, 2869-2883.	2.3	11
45	NOx sensor cross sensitivity model and simultaneous prediction of NOx and NH3 slip from automotive catalytic converters under real driving conditions. International Journal of Engine Research, 2021, 22, 3209-3218.	2.3	11
46	Evaluating the oxidation kinetic parameters of gasoline direct injection soot from thermogravimetric analysis experiments. Chemical Engineering Science, 2021, 234, 116437.	3.8	11
47	Description and Performance Analysis of a Flow Test Rig to Simulate Altitude Pressure Variation for Internal Combustion Engines Testing. SAE International Journal of Engines, 2014, 7, 1686-1696.	0.4	10
48	Application of Pre-DPF Water Injection Technique for Pressure Drop Limitation. , 2015, , .		10
49	Acoustic One-Dimensional Compressor Model for Integration in a Gas-Dynamic Code. , 0, , .		9
50	On Cooler and Mixing Condensation Phenomena in the Long-Route Exhaust Gas Recirculation Line. , 0, , .		9
51	Impact of Exhaust Gas Recirculation on Gaseous Emissions of Turbocharged Spark-Ignition Engines. Applied Sciences (Switzerland), 2020, 10, 7634.	2.5	9
52	Analysis of the Aftertreatment Sizing for Pre-Turbo DPF and DOC Exhaust Line Configurations. , 0, , .		8
53	Application of the two-step Lax and Wendroff FCT and the CE-SE method to flow transport in wall-flow monoliths. International Journal of Computer Mathematics, 2014, 91, 71-84.	1.8	8
54	Sensitivity of pollutants abatement in oxidation catalysts to the use of alternative fuels. Fuel, 2021, 297, 120686.	6.4	8

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55	Representation Limits of Mean Value Engine Models. Lecture Notes in Control and Information Sciences, 2012, , 185-206.	1.0	8
56	Modelling Analysis of Aftertreatment Inlet Temperature Dependence on Exhaust Valve and Ports Design Parameters. , 0, , .		6
57	Assessment of acoustic reciprocity and conservativeness in exhaust aftertreatment systems. Journal of Sound and Vibration, 2018, 436, 46-61.	3.9	6
58	Analysis of shock capturing methods for chemical species transport in unsteady compressible flow. Mathematical and Computer Modelling, 2013, 57, 1751-1759.	2.0	5
59	Phenomenological methodology for assessing the influence of flow conditions on the acoustic response of exhaust aftertreatment systems. Journal of Sound and Vibration, 2017, 396, 289-306.	3.9	4
60	Analysis of the Driving Altitude and Ambient Temperature Impact on the Conversion Efficiency of Oxidation Catalysts. Applied Sciences (Switzerland), 2021, 11, 1283.	2.5	4
61	Experimental Characterization of Real Driving Cycles in a Light-Duty Diesel Engine under Different Dynamic Conditions. Applied Sciences (Switzerland), 2022, 12, 2472.	2.5	4
62	Assessment of a methodology to mesh the spatial domain in the proximity of the boundary conditions for one-dimensional gas dynamic calculation. Mathematical and Computer Modelling, 2011, 54, 1747-1752.	2.0	2
63	Influence of Pre-Turbine Small-Sized Oxidation Catalyst on Engine Performance and Emissions under Driving Conditions. Applied Sciences (Switzerland), 2020, 10, 7714.	2.5	2
64	Fuel consumption and aftertreatment thermal management synergy in compression ignition engines at variable altitude and ambient temperature. International Journal of Engine Research, 0, , 146808742110350.	2.3	2
65	Influence of the cell geometry on the conversion efficiency of oxidation catalysts under real driving conditions. Energy Conversion and Management, 2021, 233, 113888.	9.2	1
66	Fuel economy benefits in internal combustion engines due to soot restructuring in the particulate filter by water injection. International Journal of Engine Research, 0, , 146808742210998.	2.3	1
67	Case studyâ€based learning using a computational tool to improve the understanding of the jet engine cycle for aerospace engineering degree students. Computer Applications in Engineering Education, 0, , .	3.4	0