

Ricardo Novella

List of Publications by Year in descending order

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116
papers

3,055
citations

201575

27
h-index

233338

45
g-index

117
all docs

117
docs citations

117
times ranked

1816
citing authors

#	ARTICLE	IF	CITATIONS
1	IJER editorial: The future of the internal combustion engine. International Journal of Engine Research, 2020, 21, 3-10.	1.4	457
2	HD Diesel engine equipped with a bottoming Rankine cycle as a waste heat recovery system. Part 1: Study and analysis of the waste heat energy. Applied Thermal Engineering, 2012, 36, 269-278.	3.0	178
3	Evaluation of the passive pre-chamber ignition concept for future high compression ratio turbocharged spark-ignition engines. Applied Energy, 2019, 248, 576-588.	5.1	106
4	The role of hydrogen for future internal combustion engines. International Journal of Engine Research, 2022, 23, 529-540.	1.4	95
5	Influence of a low pressure EGR loop on a gasoline turbocharged direct injection engine. Applied Thermal Engineering, 2015, 89, 432-443.	3.0	76
6	Suitability analysis of advanced diesel combustion concepts for emissions and noise control. Energy, 2011, 36, 825-838.	4.5	73
7	The role of detailed chemical kinetics on CFD diesel spray ignition and combustion modelling. Mathematical and Computer Modelling, 2011, 54, 1706-1719.	2.0	61
8	Potential of Atkinson cycle combined with EGR for pollutant control in a HD diesel engine. Energy Conversion and Management, 2009, 50, 174-183.	4.4	60
9	Flow regime effects on non-cavitating injection nozzles over spray behavior. International Journal of Heat and Fluid Flow, 2011, 32, 273-284.	1.1	53
10	Effect of advancing the closing angle of the intake valves on diffusion-controlled combustion in a HD diesel engine. Applied Thermal Engineering, 2009, 29, 1947-1954.	3.0	51
11	Impact of biodiesel fuel on cold starting of automotive direct injection diesel engines. Energy, 2014, 73, 653-660.	4.5	50
12	Comparative global warming impact and NOX emissions of conventional and hydrogen automotive propulsion systems. Energy Conversion and Management, 2020, 221, 113137.	4.4	49
13	Analysis of the combustion process, pollutant emissions and efficiency of an innovative 2-stroke HSDI engine designed for automotive applications. Applied Thermal Engineering, 2013, 58, 181-193.	3.0	47
14	HD Diesel engine equipped with a bottoming Rankine cycle as a waste heat recovery system. Part 2: Evaluation of alternative solutions. Applied Thermal Engineering, 2012, 36, 279-287.	3.0	45
15	Evaluation of massive exhaust gas recirculation and Miller cycle strategies for mixing-controlled low temperature combustion in a heavy duty diesel engine. Energy, 2014, 71, 355-366.	4.5	45
16	Optimization of the combustion system of a medium duty direct injection diesel engine by combining CFD modeling with experimental validation. Energy Conversion and Management, 2016, 110, 212-229.	4.4	44
17	Impact of gasoline and Diesel blends on combustion noise and pollutant emissions in Premixed Charge Compression Ignition engines. Energy, 2017, 137, 58-68.	4.5	44
18	Increased particle emissions from early fuel injection timing Diesel low temperature combustion. Fuel, 2012, 94, 184-190.	3.4	43

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19	Implementation of the Partially Premixed Combustion concept in a 2-stroke HSDI diesel engine fueled with gasoline. Applied Energy, 2014, 122, 94-111.	5.1	43
20	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.	1.3	42
21	Two Strokes Diesel Engine - Promising Solution to Reduce CO2 Emissions. Procedia, Social and Behavioral Sciences, 2012, 48, 2295-2314.	0.5	38
22	RANS modelling of a lifted H2/N2 flame using an unsteady flamelet progress variable approach with presumed PDF. Combustion and Flame, 2015, 162, 893-906.	2.8	38
23	Computational assessment towards understanding the energy conversion and combustion process of lean mixtures in passive pre-chamber ignited engines. Applied Thermal Engineering, 2020, 178, 115501.	3.0	38
24	Numerical simulation and extended validation of two-phase compressible flow in diesel injector nozzles. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2011, 225, 545-563.	1.1	35
25	An Investigation on Mixing and Auto-ignition using Diesel and Gasoline in a Direct-Injection Compression-Ignition Engine Operating in PCCI Combustion Conditions. SAE International Journal of Engines, 0, 4, 2590-2602.	0.4	35
26	Analysis of combustion concepts in a newly designed two-stroke high-speed direct injection compression ignition engine. International Journal of Engine Research, 2015, 16, 52-67.	1.4	35
27	Thermodynamic analysis of an absorption refrigeration system used to cool down the intake air in an Internal Combustion Engine. Applied Thermal Engineering, 2017, 111, 257-270.	3.0	35
28	Improving the performance of the passive pre-chamber ignition concept for spark-ignition engines fueled with natural gas. Fuel, 2021, 290, 119971.	3.4	34
29	Understanding the performance of the multiple injection gasoline partially premixed combustion concept implemented in a 2-Stroke high speed direct injection compression ignition engine. Applied Energy, 2016, 161, 465-475.	5.1	33
30	On the rate of injection modeling applied to direct injection compression ignition engines. International Journal of Engine Research, 2016, 17, 1015-1030.	1.4	32
31	Computational optimization of the combustion system of a heavy duty direct injection diesel engine operating with dimethyl-ether. Fuel, 2018, 218, 127-139.	3.4	31
32	Combustion noise analysis of partially premixed combustion concept using gasoline fuel in a 2-stroke engine. Energy, 2016, 107, 612-624.	4.5	30
33	Comprehensive study of biodiesel fuel for HSDI engines in conventional and low temperature combustion conditions. Renewable Energy, 2010, 35, 368-378.	4.3	28
34	A numerical study of the effect of nozzle diameter on diesel combustion ignition and flame stabilization. International Journal of Engine Research, 2020, 21, 101-121.	1.4	28
35	The role of in-cylinder gas density and oxygen concentration on late spray mixing and soot oxidation processes. Energy, 2011, 36, 1599-1611.	4.5	27
36	Study on Low Temperature Combustion for Light-Duty Diesel Engines. Energy & Fuels, 2010, 24, 355-364.	2.5	26

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37	Application of an unsteady flamelet model in a RANS framework for spray A simulation. Applied Thermal Engineering, 2017, 117, 50-64.	3.0	26
38	An experimental and one-dimensional modeling analysis of turbulent gas ejection in pre-chamber engines. Fuel, 2021, 299, 120861.	3.4	26
39	Influence of the n-dodecane chemical mechanism on the CFD modelling of the diesel-like ECN Spray A flame structure at different ambient conditions. Combustion and Flame, 2019, 208, 198-218.	2.8	24
40	Numerical Methodology for Optimization of Compression-Ignited Engines Considering Combustion Noise Control. SAE International Journal of Engines, 0, 11, 625-642.	0.4	23
41	Optimization and sizing of a fuel cell range extender vehicle for passenger car applications in driving cycle conditions. Applied Energy, 2021, 285, 116469.	5.1	23
42	Advantages of the unscavenged pre-chamber ignition system in turbocharged natural gas engines for automotive applications. Energy, 2021, 218, 119466.	4.5	22
43	Experimental and Numerical Analysis of Passive Pre-Chamber Ignition with EGR and Air Dilution for Future Generation Passenger Car Engines. , 0, , .		22
44	Influence of injection conditions and exhaust gas recirculation in a high-speed direct-injection diesel engine operating with a late split injection. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2008, 222, 629-641.	1.1	21
45	Impact of the injector design on the combustion noise of gasoline partially premixed combustion in a 2-stroke engine. Applied Thermal Engineering, 2017, 119, 530-540.	3.0	21
46	Internal Combustion Engine Heat Transfer and Wall Temperature Modeling: An Overview. Archives of Computational Methods in Engineering, 2020, 27, 1661-1679.	6.0	21
47	Advantages of hydrogen addition in a passive pre-chamber ignited <scp>SI</scp> engine for passenger car applications. International Journal of Energy Research, 2021, 45, 13219-13237.	2.2	21
48	Impact of fuel cell range extender powertrain design on greenhouse gases and NOX emissions in automotive applications. Applied Energy, 2021, 302, 117526.	5.1	21
49	ADVANCED METHODOLOGY FOR IMPROVING TESTING EFFICIENCY IN A SINGLE-CYLINDER RESEARCH DIESEL ENGINE. Experimental Techniques, 2008, 32, 41-47.	0.9	20
50	Computational optimization of a combustion system for a stoichiometric DME fueled compression ignition engine. Fuel, 2018, 223, 20-31.	3.4	20
51	Particle Size Distribution Measurements from Early to Late Injection Timing Low Temperature Combustion in a Heavy Duty Diesel Engine. SAE International Journal of Fuels and Lubricants, 0, 3, 567-581.	0.2	19
52	Investigation of the ignition and combustion processes of a dual-fuel spray under diesel-like conditions using computational fluid dynamics (CFD) modeling. Mathematical and Computer Modelling, 2013, 57, 1897-1906.	2.0	19
53	Comprehensive modeling study analyzing the insights of the NO ^x conversion process in current diesel engines. Energy Conversion and Management, 2014, 84, 691-700.	4.4	19
54	A computational analysis of local flow for reacting Diesel sprays by means of an Eulerian CFD model. International Journal of Multiphase Flow, 2018, 99, 257-272.	1.6	19

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55	Study of the influence of emission control strategies on the soot content and fuel dilution in engine oil. Tribology International, 2019, 136, 285-298.	3.0	19
56	Application of a flamelet-based CFD combustion model to the LES simulation of a diesel-like reacting spray. Computers and Fluids, 2020, 200, 104419.	1.3	19
57	Investigation on Multiple Injection Strategies for Gasoline PPC Operation in a Newly Designed 2-Stroke HSDI Compression Ignition Engine. SAE International Journal of Engines, 2015, 8, 758-774.	0.4	18
58	Numerical analysis of the passive pre-chamber ignition concept for light duty applications. Applied Thermal Engineering, 2022, 213, 118610.	3.0	18
59	Effect of dynamic and operational restrictions in the energy management strategy on fuel cell range extender electric vehicle performance and durability in driving conditions. Energy Conversion and Management, 2022, 266, 115821.	4.4	18
60	Influence of Boost Pressure and Injection Pressure on Combustion Process and Exhaust Emissions in a HD Diesel Engine. , 0, , .		17
61	Thermal analysis of a light-duty CI engine operating with diesel-gasoline dual-fuel combustion mode. Energy, 2016, 115, 1305-1319.	4.5	17
62	Comparison of two injection systems in an HSDI diesel engine using split injection and different injector nozzles. International Journal of Automotive Technology, 2010, 11, 139-146.	0.7	16
63	Combustion system optimization for the integration of e-fuels (Oxymethylene Ether) in compression ignition engines. Fuel, 2021, 305, 121580.	3.4	16
64	Achieving Ultra-Lean Combustion Using a Pre-Chamber Spark Ignition System in a Rapid Compression-Expansion Machine. , 0, , .		16
65	Soot Quantification of Single-Hole Diesel Sprays by Means of Extinction Imaging. SAE International Journal of Engines, 0, 8, 2068-2077.	0.4	14
66	A modeling framework for predicting the effect of the operating conditions and component sizing on fuel cell degradation and performance for automotive applications. Applied Energy, 2022, 317, 119137.	5.1	14
67	An adapted heat transfer model for engines with tumble motion. Applied Energy, 2015, 158, 190-202.	5.1	13
68	Improving pollutant emissions in diesel engines for heavy-duty transportation using retarded intake valve closing strategies. International Journal of Automotive Technology, 2008, 9, 257-265.	0.7	12
69	Impact of injection settings operating with the gasoline Partially Premixed Combustion concept in a 2-stroke HSDI compression ignition engine. Applied Energy, 2017, 193, 515-530.	5.1	12
70	Analysis of combustion acoustic phenomena in compression-ignition engines using large eddy simulation. Physics of Fluids, 2020, 32, 085101.	1.6	12
71	Advanced Injection Strategies to Attain Partially Premixed Combustion Process in a Heavy Duty Diesel Engine. , 2008, , .		11
72	Partially Premixed Combustion in a Diesel Engine Induced by a Pilot Injection at the Low-pressure Top Dead Center. Energy & Fuels, 2009, 23, 2891-2902.	2.5	11

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73	Effect of Intake Oxygen Concentration on Particle Size Distribution Measurements from Diesel Low Temperature Combustion. SAE International Journal of Engines, 0, 4, 1888-1902.	0.4	11
74	CFD analysis of combustion and emission characteristics of primary reference fuels: from transient Diesel spray to heavy-duty engine. Fuel, 2021, 301, 120994.	3.4	11
75	Potential of dual spray injectors for optimising the noise emission of gasoline partially premixed combustion in a 2-stroke HSDI CI engine. Applied Thermal Engineering, 2018, 134, 369-378.	3.0	10
76	Assessing the optimum combustion under constrained conditions. International Journal of Engine Research, 2020, 21, 811-823.	1.4	10
77	Understanding the diesel-like spray characteristics applying a flamelet-based combustion model and detailed large eddy simulations. International Journal of Engine Research, 2020, 21, 134-150.	1.4	10
78	Acoustic characterization of combustion chambers in reciprocating engines: An application for low knocking cycles recognition. International Journal of Engine Research, 2022, 23, 120-131.	1.4	10
79	A numerical investigation of the performance of oxymethylene ethers blended with fossil diesel to reduce soot emissions in compression ignition engines. Fuel, 2022, 324, 124768.	3.4	10
80	A Procedure to Achieve 1D Predictive Modeling of Turbochargers under Hot and Pulsating Flow Conditions at the Turbine Inlet. , 2014, , .		9
81	Pre-chamber ignition systems: A methodological proposal to reproduce a reference case in a simplified experimental facility for fundamental studies. International Journal of Engine Research, 2021, 22, 3358-3371.	1.4	9
82	New Combustion Modelling Approach for Methane-Hydrogen Fueled Engines Using Machine Learning and Engine Virtualization. Energies, 2021, 14, 6732.	1.6	9
83	Experimental Evaluation of Methane-Hydrogen Mixtures for Enabling Stable Lean Combustion in Spark-Ignition Engines for Automotive Applications. , 0, , .		9
84	Analysis of the Load Effect on the Partially Premixed Combustion Concept in a 2-Stroke HSDI Diesel Engine Fueled with Conventional Gasoline. , 2014, , .		8
85	On the shift of acoustic characteristics of compression-ignited engines when operating with gasoline partially premixed combustion. Applied Thermal Engineering, 2019, 146, 223-231.	3.0	7
86	Computational study of ECN Spray A and Spray D combustion at different ambient temperature conditions. Transportation Engineering, 2020, 2, 100027.	2.3	7
87	Investigation of the effects of turbulence modeling on the prediction of compression-ignition combustion unsteadiness. International Journal of Engine Research, 2022, 23, 541-559.	1.4	7
88	The Potential of Highly Premixed Combustion for Pollutant Control in an Automotive Two-Stroke HSDI Diesel Engine. , 2012, , .		6
89	Study on LTC for light duty engines “ Part 2 “ Spray enhancements. Fuel, 2017, 193, 206-219.	3.4	6
90	Evaluation of the approximated diffusion flamelet concept using fuels with different chemical complexity. Applied Mathematical Modelling, 2017, 49, 354-374.	2.2	6

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91	Computational Methodology for Knocking Combustion Analysis in Compression-Ignited Advanced Concepts. Applied Sciences (Switzerland), 2018, 8, 1707.	1.3	6
92	Modeling gaseous non-reactive flow in a lean direct injection gas turbine combustor through an advanced mesh control strategy. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Aerospace Engineering, 2020, 234, 1788-1810.	0.7	6
93	A two-equation soot-in-flamelet modeling approach applied under Spray A conditions. Combustion and Flame, 2021, 231, 111488.	2.8	6
94	Analysis of an extremely fast valve opening camless system to improve transient performance in a turbocharged high speed direct injection diesel engine. International Journal of Vehicle Design, 2009, 49, 192.	0.1	5
95	Evaluation of the Potential Benefits of an Automotive, Gasoline, 2-Stroke Engine. , 2015, , .		5
96	Evaluation of combustion models based on tabulated chemistry and presumed probability density function approach for diesel spray simulation. International Journal of Computer Mathematics, 2014, 91, 14-23.	1.0	4
97	CFD Modeling of Reacting Diesel Sprays with Primary Reference Fuel. SAE International Journal of Advances and Current Practices in Mobility, 0, 3, 2433-2451.	2.0	3
98	Analysis of the highly premixed combustion attained by a late injection strategy in an HD diesel engine. International Journal of Vehicle Design, 2006, 40, 327.	0.1	2
99	A New Methodology to Evaluate Engine Ignition Systems in High Density Conditions. Experimental Techniques, 2014, 38, 17-28.	0.9	2
100	An Insight on the Spray-A Combustion Characteristics by Means of RANS and LES Simulations Using Flamelet-Based Combustion Models. , 0, , .		2
101	An Investigation of the Engine Combustion Network "Spray B"™ in a Light Duty Single Cylinder Optical Engine. , 2018, , .		2
102	Assessment of air management strategies on particulate number and size distributions from a 2-stroke compression-ignition engine operating with gasoline Partially Premixed Combustion concept. International Journal of Engine Research, 2020, 21, 448-469.	1.4	2
103	Identification of Adequate Combustion in Turbulent Jet Ignition Engines using Machine Learning Algorithms. IFAC-PapersOnLine, 2021, 54, 102-107.	0.5	2
104	Introduction to the current and future use of H2 and H2-based e-fuels in combustion engines and fuel cells Special Issue. International Journal of Engine Research, 2022, 23, 707-708.	1.4	2
105	A computational analysis of the impact of bore-to-stroke ratio on emissions and efficiency of a HSDI engine. Applied Energy, 2017, 205, 903-910.	5.1	1
106	Numerical Optimization of the Combustion System of a HD Compression Ignition Engine Fueled with DME Considering Current and Future Emission Standards. , 0, , .		1
107	Representation of Two-Stroke Engine Scavenging in 1D Models Using 3D Simulations. , 2018, , .		1
108	Effects of multiple injection strategies on gaseous emissions and particle size distribution in a two-stroke compression-ignition engine operating with the gasoline partially premixed combustion concept. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2019, 233, 2650-2668.	1.1	1

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109	Estimation of the in-cylinder residual mass fraction at intake valve closing in a two-stroke high-speed direct-injection compression-ignition engine. International Journal of Engine Research, 2020, 21, 838-855.	1.4	1
110	Engine optimization using computational fluid dynamics and genetic algorithms. , 2022, , 71-101.		1
111	Experimental Study of Two Air Management Strategies for Emissions Control in Heavy Duty Engines at Medium to High Loads. Energy & Fuels, 2017, 31, 10011-10022.	2.5	0
112	Influence of the chemical mechanism in the frame of diesel-like CFD reacting spray simulations using a presumed PDF flamelet-based combustion model. , 0, , .		0
113	COMPUTATIONAL LAB SESSION FOR IMPROVING LEARNING SKILLS OF THERMODYNAMIC PHENOMENA IN MECHANICAL ENGINEERING. , 2021, , .		0
114	Improving the specific instrumental soft skill of Aerospace Engineers through a lab experience. , 0, , .		0
115	Impact of the Powertrain Sizing on Cradle-to-Grave Emissions and Fuel Cell Degradation in a FCV with a Range-Extender Architecture. , 0, , .		0
116	Feasibility Study for a Fuel Cell-Powered Unmanned Aerial Vehicle with a 75 Kg Payload. Transactions of the Institute of Aviation, 2022, 2022, 13-30.	0.3	0