Tommaso Lucchini

List of Publications by Year
in descending order

92	1,870	430442	433756
papers	citations	18 h-index	31 g-index

92	92	92	1072
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Numerical and experimental investigations of the early injection process of Spray G in a constant volume chamber and an optically accessible DISI engine. International Journal of Engine Research, 2022, 23, 2073-2093.	1.4	4
2	Combustion modelling of turbulent jet ignition in a divided combustion chamber. International Journal of Engine Research, 2022, 23, 1937-1953.	1.4	5
3	Modeling heavy-duty diesel engines using tabulated kinetics in a wide range of operating conditions. International Journal of Engine Research, 2021, 22, 1116-1132.	1.4	11
4	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
5	Combustion system optimization for the integration of e-fuels (Oxymethylene Ether) in compression ignition engines. Fuel, 2021, 305, 121580.	3.4	16
6	Modeling diesel combustion with tabulated kinetics and different flame structure assumptions based on flamelet approach. International Journal of Engine Research, 2020, 21, 89-100.	1.4	21
7	Validation of a comprehensive computational fluid dynamics methodology to predict the direct injection process of gasoline sprays using Spray G experimental data. International Journal of Engine Research, 2020, 21, 199-216.	1.4	35
8	A novel technique for detailed and time-efficient combustion modeling of fumigated dual-fuel internal combustion engines. Applied Thermal Engineering, 2020, 174, 115224.	3.0	15
9	Application of a multiple mapping conditioning mixing model to ECN Spray A. Proceedings of the Combustion Institute, 2019, 37, 3263-3270.	2.4	17
10	Modelling compression ignition engines by incorporation of the flamelet generated manifolds combustion closure. Combustion Theory and Modelling, 2019, 23, 414-438.	1.0	10
11	CFD and experimental analysis of the coolant flow in cryogenic milling. International Journal of Machine Tools and Manufacture, 2019, 140, 20-33.	6.2	51
12	A Numerical Study on the Sensitivity of Soot and NOx Formation to the Operating Conditions in Heavy Duty Engines. , 2018, , .		3
13	Evaluation of wall heat flux calculation methods for CFD simulations of an internal combustion engine under both motored and HCCI operation. Applied Energy, 2018, 232, 451-461.	5.1	11
14	A comprehensive methodology for computational fluid dynamics combustion modeling of industrial diesel engines. International Journal of Engine Research, 2017, 18, 26-38.	1.4	8
15	Evaluation of empirical heat transfer models for HCCI combustion in a CFR engine. Applied Energy, 2017, 205, 1141-1150.	5.1	29
16	An investigation of the validity of a homogeneous equilibrium model for different diesel injector nozzles and flow conditions. Energy Conversion and Management, 2017, 154, 46-55.	4.4	15
17	Gas Exchange and Injection Modeling of an Advanced Natural Gas Engine for Heavy Duty Applications. , 2017, , .		9
18	Modeling Ignition and Premixed Combustion Including Flame Stretch Effects. , 2017, , .		24

#	Article	IF	Citations
19	Modeling n-dodecane Spray Combustion with a Representative Interactive Linear Eddy Model. , 2017, , .		1
20	Parametric Comparison of Well-Mixed and Flamelet n-dodecane Spray Combustion with Engine Experiments at Well Controlled Boundary Conditions. , 2016, , .		7
21	Heat transfer in premixed spark ignition engines part II: Systematic analysis of the heat transfer phenomena. Energy, 2016, 116, 851-860.	4.5	21
22	Experimental investigation of the effect of engine settings on the wall heat flux during HCCI combustion. Energy, 2016, 116, 1077-1086.	4.5	9
23	Numerical Simulation of Non-reacting Diesel Fuel Sprays under Low Temperature Late Injection Operating Condition. Energy Procedia, 2015, 81, 960-966.	1.8	1
24	RANS predictions of turbulent diffusion flames: comparison of a reactor and a flamelet combustion model to the well stirred approach. Combustion Theory and Modelling, 2015, 19, 81-106.	1.0	11
25	A Comparative Study of Conditional Moment Closure Modelling for Ignition of iso-octane and n-heptane in Thermally Stratified Mixtures. Flow, Turbulence and Combustion, 2015, 95, 1-28.	1.4	23
26	Numerical Simulation of Diesel Injector Internal Flow Field. Energy Procedia, 2015, 82, 51-58.	1.8	6
27	CFD Modelling of Flame Stretch in SI Engines. Energy Procedia, 2015, 82, 59-66.	1.8	4
28	Computational fluid dynamics modeling of combustion in heavy-duty diesel engines. International Journal of Engine Research, 2015, 16, 112-124.	1.4	27
29	Effects of fuel cetane number on the structure of diesel spray combustion: An accelerated Eulerian stochastic fields method. Combustion Theory and Modelling, 2015, 19, 549-567.	1.0	27
30	Effects of grid alignment on modeling the spray and mixing process in direct injection diesel engines under non-reacting operating conditions. Applied Thermal Engineering, 2015, 91, 901-912.	3.0	18
31	Reduced kinetic mechanisms of diesel fuel surrogate for engine CFD simulations. Combustion and Flame, 2015, 162, 3991-4007.	2.8	73
32	Conditional moment closure modelling for HCCI with temperature inhomogeneities. Proceedings of the Combustion Institute, 2015, 35, 3087-3095.	2.4	20
33	A SPHERICAL VOLUME INTERACTION DDM APPROACH FOR DIESEL SPRAY MODELING. Atomization and Sprays, 2015, 25, 335-374.	0.3	9
34	Automatic Mech Generation for Full-Cycle CFD Modeling of IC Engines: Application to the TCC Test Case. , 2014, , .		11
35	Influence of Cylindrical, k, and ks Diesel Nozzle Shape on the Injector Internal Flow Field and on the Emerging Spray Characteristics. , 2014, , .		8
36	LES of Flow Processes in an SI Engine Using Two Approaches: OpenFoam and PsiPhi. , 2014, , .		10

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37	Application of Adaptive Local Mesh Refinement (ALMR) Approach for the Modeling of Reacting Biodiesel Fuel Spray using OpenFOAM. , 2014, , .		1
38	Development and application of a computational fluid dynamics methodology to predict fuelâ€“air mixing and sources of soot formation in gasoline direct injection engines. International Journal of Engine Research, 2014, 15, 581-596.	1.4	43
39	Large Eddy Simulation of Air Entrainment and Mixing in Reacting and Non-Reacting Diesel Sprays. Flow, Turbulence and Combustion, 2014, 93, 385-404.	1.4	44
40	CFD simulations using the TDAC method to model iso-octane combustion for a large range of ozone seeding and temperature conditions in a single cylinder HCCI engine. Fuel, 2014, 137, 179-184.	3.4	46
41	Development of a reduced biodiesel combustion kinetics mechanism for CFD modelling of a light-duty diesel engine. Fuel, 2013, 106, 388-400.	3.4	69
42	Computational study of biodieselâ€“diesel fuel blends on emission characteristics for a light-duty diesel engine using OpenFOAM. Applied Energy, 2013, 111, 827-841.	5.1	27
43	Effects of EGR on the structure and emissions of diesel combustion. Proceedings of the Combustion Institute, 2013, 34, 3091-3098.	2.4	43
44	Investigation of Biodieselâ€“Diesel Fuel Blends on Combustion Characteristics in a Light-Duty Diesel Engine Using OpenFOAM. Energy & Fuels, 2013, 27, 208-219.	2.5	14
45	Experimental and numerical analysis of nitric oxide effect on the ignition of iso-octane in a single cylinder HCCI engine. Combustion and Flame, 2013, 160, 1476-1483.	2.8	86
46	Effects of Fuel Thermo-Physical Properties on Spray Characteristics of Biodiesel Fuels. Lecture Notes in Electrical Engineering, 2013, , 117-126.	0.3	2
47	Development of Thermophysical and Transport Properties for the CFD Simulations of In-Cylinder Biodiesel Spray Combustion. Energy & Fuels, 2012, 26, 4857-4870.	2.5	39
48	Computational Fluid Dynamics Simulation of Diesel Engines with Sophisticated Injection Strategies for In-Cylinder Pollutant Controls. Energy & Fuels, 2012, 26, 4212-4223.	2.5	7
49	Application of a thermodynamic model with a complex chemistry to a cycle resolved knock prediction on a spark ignition optical engine. International Journal of Automotive Technology, 2012, 13, 389-399.	0.7	15
50	Multi-Dimensional Modeling of Combustion in Compression Ignition Engines Operating with Variable Charge Premixing Levels. , 2011, , .		4
51	Numerical investigation of the sprayâ€“meshâ€“turbulence interactions for high-pressure, evaporating sprays at engine conditions. International Journal of Heat and Fluid Flow, 2011, 32, 285-297.	1.1	57
52	Coupling of in situ adaptive tabulation and dynamic adaptive chemistry: An effective method for solving combustion in engine simulations. Proceedings of the Combustion Institute, 2011, 33, 3057-3064.	2.4	153
53	Implementation of a Finite-Element Based Mesh Motion Technique in an Open Source CFD Code. , 2009, , .		1
54	Experimental and Numerical Investigation of High-Pressure Diesel Sprays with Multiple Injections at Engine Conditions. , 0, , .		31

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55	Multi-Dimensional Modeling of Gas Exchange and Fuel-Air Mixing Processes in a Direct-Injection, Gas Fueled Engine. , 0, , .		22
56	Experimental Characterization of High-Pressure Impinging Sprays for CFD Modeling of GDI Engines. SAE International Journal of Engines, 0, 4, 747-763.	0.4	15
57	Application of the CTC Model to Predict Combustion and Pollutant Emissions in a Common-Rail Diesel Engine Operating with Multiple Injections and High EGR. , 0, , .		11
58	Development of a CFD Approach to Model Fuel-Air Mixing in Gasoline Direct-Injection Engines. , 0, , .		31
59	Comparison and Standardization of Numerical Approaches for the Prediction of Non-reacting and Reacting Diesel Sprays. , 0, , .		31
60	Numerical Simulation of the ECN Spray A Using Multidimensional Chemistry Coordinate Mapping: n-Dodecane Diesel Combustion. , 0, , .		11
61	Simulations of Advanced Combustion Modes Using Detailed Chemistry Combined with Tabulation and Mechanism Reduction Techniques. SAE International Journal of Engines, 0, 5, 185-196.	0.4	32
62	Full-Cycle CFD Modeling of Air/Fuel Mixing Process in an Optically Accessible GDI Engine. SAE International Journal of Engines, 0, 6, 1610-1625.	0.4	17
63	Reduced Kinetic Mechanisms for Diesel Spray Combustion Simulations. , 0, , .		10
64	A Comprehensive Model to Predict the Initial Stage of Combustion in SI Engines. , 0, , .		50
65	Detailed Kinetic Analysis of HCCI Combustion Using a New Multi-Zone Model and CFD Simulations. SAE International Journal of Engines, 0, 6, 1594-1609.	0.4	15
66	Towards the Use of Eulerian Field PDF Methods for Combustion Modeling in IC Engines. SAE International Journal of Engines, 0, 7, 286-296.	0.4	6
67	A Numerical Study of the Influence of Different Operating Conditions on the Combustion Development in an Automotive-Size Diesel Engine. , 0, , .		5
68	Combustion Modeling in Heavy Duty Diesel Engines Using Detailed Chemistry and Turbulence-Chemistry Interaction. , 0, , .		10
69	Automatic Mesh Generation for CFD Simulations of Direct-Injection Engines. , 0, , .		44
70	Calibration of a TFG Sensor for Heat Flux Measurements in a S.I. Engine. SAE International Journal of Engines, 0, 8, 1692-1700.	0.4	9
71	A Progress Review on Soot Experiments and Modeling in the Engine Combustion Network (ECN). SAE International Journal of Engines, 0, 9, 883-898.	0.4	58
72	Experimental and Numerical Analyses of Liquid and Spray Penetration under Heavy-Duty Diesel Engine Conditions. SAE International Journal of Fuels and Lubricants, 0, 9, 108-124.	0.2	15

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73	Demonstrating the Use of Thin Film Gauges for Heat Flux Measurements in ICEs: Measurements on an Inlet Valve in Motored Operation. , 0, , .		6
74	Experimental and Numerical Study of Flame Kernel Formation Processes of Propane-Air Mixture in a Pressurized Combustion Vessel. SAE International Journal of Engines, 0, 9, 1494-1511.	0.4	17
75	Modeling Non-Premixed Combustion Using Tabulated Kinetics and Different Fame Structure Assumptions. SAE International Journal of Engines, 0, 10, 593-607.	0.4	37
76	Evaluation of Wall Heat Flux Models for Full Cycle CFD Simulation of Internal Combustion Engines under Motoring Operation. , 0, , .		7
77	Experimental Validation of Combustion Models for Diesel Engines Based on Tabulated Kinetics in a Wide Range of Operating Conditions. , 0, , .		8
78	A Comparison of Experimental and Modeled Velocity in Gasoline Direct-Injection Sprays with Plume Interaction and Collapse. SAE International Journal of Fuels and Lubricants, 0, 10, 184-201.	0.2	43
79	Heavy-Duty Diesel Engine Spray Combustion Processes: Experiments and Numerical Simulations. , 0, , .		19
80	A Heat Transfer Model for Low Temperature Combustion Engines. , 0, , .		3
81	Combined Experimental and Numerical Investigation of the ECN Spray G under Different Engine-Like Conditions. , 0, , .		21
82	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
83	Validation of Diesel Combustion Models with Turbulence Chemistry Interaction and Detailed Kinetics. , 0, , .		6
84	CFD Modeling of Gas Exchange, Fuel-Air Mixing and Combustion in Gasoline Direct-Injection Engines. , 0, , .		8
85	Development and Validation of SI Combustion Models for Natural-Gas Heavy-Duty Engines. , 0, , .		12
86	Computational Modeling of Diesel Spray Combustion with Multiple Injections. SAE International Journal of Advances and Current Practices in Mobility, 0, 2, 2839-2858.	2.0	9
87	A Coupled Tabulated Kinetics and Flame Propagation Model for the Simulation of Fumigated Medium Speed Dual-Fuel Engines. , 0, , .		2
88	Numerical Investigation on GDI Spray under High Injection Pressure up to 100 MPa. , 0, , .		2
89	CFD Modeling of Impinging Sprays Under Large Two-Stroke Marine Engine-Like Conditions. , 0, , .		0
90	A 3D-CFD Methodology for Combustion Modeling in Active Prechamber SI Engines Operating with Natural Gas. , 0, , .		6

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91	Modeling Fuel-Air Mixing, Combustion and Soot Formation with Ducted Fuel Injection Using Tabulated Kinetics. , 0, , .		2
92	3D-CFD Methodologies for a Fast and Reliable Design of Ultra-Lean SI Engines. , 0, , .		4