Rolf D Reitz

List of Publications by Citations

174 papers	10,684 citations	52 h-index	99 g-index
178 ext. papers	12,220 ext. citations	3.8 avg, IF	6.92 L-index

#	Paper	IF	Citations
174	Review of high efficiency and clean reactivity controlled compression ignition (RCCI) combustion in internal combustion engines. *Progress in Energy and Combustion Science*, **2015**, 46, 12-71	33.6	732
173	MODELING SPRAY ATOMIZATION WITH THE KELVIN-HELMHOLTZ/RAYLEIGH-TAYLOR HYBRID MODEL. *Atomization and Sprays*, **1999**, 9, 623-650	1.2	713
172	A temperature wall function formulation for variable-density turbulent flows with application to engine convective heat transfer modeling. *International Journal of Heat and Mass Transfer*, **1997**, 40, 613-625	4.9	436
171	Directions in internal combustion engine research. *Combustion and Flame*, **2013**, 160, 1-8	5.3	422
170	A reduced chemical kinetic model for IC engine combustion simulations with primary reference fuels. *Combustion and Flame*, **2008**, 155, 713-738	5.3	361
169	Structure of High-Pressure Fuel Sprays **1987**,		360
168	Modeling the Effects of Drop Drag and Breakup on Fuel Sprays **1993**,		340
167	Modeling the Effects of Fuel Spray Characteristics on Diesel Engine Combustion and Emission **1998**,		302
166	A vaporization model for discrete multi-component fuel sprays. *International Journal of Multiphase Flow*, **2009**, 35, 101-117	3.6	251
165	Mechanism of Soot and NOx Emission Reduction Using Multiple-injection in a Diesel Engine **1996**,		249
164	Development and Validation of a Reduced Reaction Mechanism for HCCI Engine Simulations **2004**,		227
163	Modeling Engine Spray/Wall Impingement **1988**,		211
162	A combustion model for IC engine combustion simulations with multi-component fuels. *Combustion and Flame*, **2011**, 158, 69-90	5.3	191
161	On the Dependence of Spray Angle and Other Spray Parameters on Nozzle Design and Operating Conditions **1979**,		154
160	An ignition and combustion model based on the level-set method for spark ignition engine multidimensional modeling. *Combustion and Flame*, **2006**, 145, 1-15	5.3	148
159	Modeling and Experiments of HCCI Engine Combustion Using Detailed Chemical Kinetics with Multidimensional CFD **2001**,		144
158	Comparison of Low Temperature Combustion Strategies for Advanced Compression Ignition Engines with a Focus on Controllability. *Combustion Science and Technology*, **2014**, 186, 210-241	1.5	139

157	Investigation of Mixing and Temperature Effects on HC/CO Emissions for Highly Dilute Low Temperature Combustion in a Light Duty Diesel Engine **2007**,		137
156	Development of a Reduced Primary Reference Fuel Mechanism for Internal Combustion Engine Combustion Simulations. *Energy & Fuels*, **2013**, 27, 7843-7853	4.1	133
155	A reduced toluene reference fuel chemical kinetic mechanism for combustion and polycyclic-aromatic hydrocarbon predictions. *Combustion and Flame*, **2015**, 162, 2390-2404	5.3	126
154	Progress and recent trends in reactivity-controlled compression ignition engines. *International Journal of Engine Research*, **2016**, 17, 481-524	2.7	109
153	Development of a skeletal mechanism for diesel surrogate fuel by using a decoupling methodology. *Combustion and Flame*, **2015**, 162, 3785-3802	5.3	109
152	Evaluating temperature and fuel stratification for heat-release rate control in a reactivity-controlled compression-ignition engine using optical diagnostics and chemical kinetics modeling. *Combustion and Flame*, **2015**, 162, 2729-2742	5.3	108
151	Reduction of Numerical Parameter Dependencies in Diesel Spray Models. *Journal of Engineering for Gas Turbines and Power*, **2008**, 130,	1.7	104
150	Application of detailed chemistry and CFD for predicting direct injection HCCI engine combustion and emissions. *Proceedings of the Combustion Institute*, **2002**, 29, 663-669	5.9	104
149	Development of a Practical Soot Modeling Approach and Its Application to Low-Temperature Diesel Combustion. *Combustion Science and Technology*, **2010**, 182, 1050-1082	1.5	99
148	An Improved Spray Model for Reducing Numerical Parameter Dependencies in Diesel Engine CFD Simulations **2008**,		98
147	Effects of diesel injection strategy on natural gas/diesel reactivity controlled compression ignition combustion. *Energy*, **2015**, 90, 814-826	7.9	97
146	An Analytical Jacobian Approach to Sparse Reaction Kinetics for Computationally Efficient Combustion Modeling with Large Reaction Mechanisms. *Energy & Fuels*, **2012**, 26, 4804-4822	4.1	97
145	Nine-step phenomenological diesel soot model validated over a wide range of engine conditions. *International Journal of Thermal Sciences*, **2009**, 48, 1223-1234	4.1	94
144	Effects of Injection Pressure and Nozzle Geometry on D.I. Diesel Emissions and Performance **1995**,		89
143	Development of a reduced n-dodecane-PAH mechanism and its application for n-dodecane soot predictions. *Fuel*, **2014**, 136, 25-36	7.1	86
142	Comparison of the Characteristic Time (CTC), Representative Interactive Flamelet (RIF), and Direct Integration with Detailed Chemistry Combustion Models against Optical Diagnostic Data for Multi-Mode Combustion in a Heavy-Duty DI Diesel Engine **2006**,		83
141	Modeling of Multicomponent Fuels Using Continuous Distributions with Application to Droplet Evaporation and Sprays **1997**,		78
140	Direct Dual Fuel Stratification, a Path to Combine the Benefits of RCCI and PPC. *SAE International Journal of Engines*, **2015**, 8, 878-889	2.4	75

139	A model for high-pressure vaporization of droplets of complex liquid mixtures using continuous thermodynamics. *International Journal of Heat and Mass Transfer*, **2002**, 45, 495-507	4.9	74
138	Optimization of a hydrocarbon fuel ignition model for two single component surrogates of diesel fuel. *Combustion and Flame*, **2003**, 132, 433-450	5.3	71
137	A new predictive model for fragmenting and non-fragmenting binary droplet collisions. *International Journal of Multiphase Flow*, **2007**, 33, 873-896	3.6	70
136	Development of a combined reduced primary reference fuel-alcohols (methanol/ethanol/propanols/butanols/n-pentanol) mechanism for engine applications. *Energy*, **2016**, 114, 542-558	7.9	64
135	Acceleration of the chemistry solver for modeling DI engine combustion using dynamic adaptive chemistry (DAC) schemes. *Combustion Theory and Modelling*, **2010**, 14, 69-89	1.5	63
134	An Experimental Investigation of Partially Premixed Combustion Strategies Using Multiple Injections in a Heavy-Duty Diesel Engine **2006**,		63
133	An investigation of thermodynamic states during high-pressure fuel injection using equilibrium thermodynamics. *International Journal of Multiphase Flow*, **2015**, 72, 24-38	3.6	62
132	Optimization of a heavy-duty compression ignition engine fueled with diesel and gasoline-like fuels. *Fuel*, **2010**, 89, 3416-3430	7.1	61
131	Gradient effects on two-color soot optical pyrometry in a heavy-duty DI diesel engine. *Combustion and Flame*, **2008**, 153, 216-227	5.3	61
130	Reactivity controlled compression ignition and conventional diesel combustion: A comparison of methods to meet light-duty NOx and fuel economy targets. *International Journal of Engine Research* , **2013**, 14, 452-468	2.7	60
129	Unsteady turbulent round jets and vortex motion. *Physics of Fluids*, **2007**, 19, 125102	4.4	60
128	Modeling Diesel Engine NOx and Soot Reduction with Optimized Two-Stage Combustion **2006**,		59
127	A numerical study of the effects of using hydrogen, reformer gas and nitrogen on combustion, emissions and load limits of a heavy duty natural gas/diesel RCCI engine. *Applied Energy*, **2017**, 193, 182-198	10.7	58
126	NUMERICAL STUDY ON THE LOW EMISSION WINDOW OF HOMOGENEOUS CHARGE COMPRESSION IGNITION DIESEL COMBUSTION. *Combustion Science and Technology*, **2007**, 179, 2279-2307	1.5	55
125	COMPREHENSIVE COLLISION MODEL FOR MULTIDIMENSIONAL ENGINE SPRAY COMPUTATIONS. *Small Group Research*, **2009**, 19, 597-619	2.5	55
124	Development of an n-heptane/toluene/polyaromatic hydrocarbon mechanism and its application for combustion and soot prediction. *International Journal of Engine Research*, **2013**, 14, 434-451	2.7	52
123	Reactivity Controlled Compression Ignition Using Premixed Hydrated Ethanol and Direct Injection Diesel. *Journal of Engineering for Gas Turbines and Power*, **2012**, 134,	1.7	52
122	A combustion model for multi-component fuels using a physical surrogate group chemistry representation (PSGCR). *Combustion and Flame*, **2015**, 162, 3456-3481	5.3	50

121	Development of a reduced toluene reference fuel (TRF)-2,5-dimethylfuran-polycyclic aromatic hydrocarbon (PAH) mechanism for engine applications. *Combustion and Flame*, **2016**, 165, 453-465	5.3	49
120	Evaluation of the effects of injection timing and rate-shape on diesel low temperature combustion using advanced CFD modeling. *Fuel*, **2009**, 88, 1235-1244	7.1	49
119	Automatic Chemistry Mechanism Reduction of Hydrocarbon Fuels for HCCI Engines Based on DRGEP and PCA Methods with Error Control. *Energy & Fuels*, **2010**, 24, 1646-1654	4.1	48
118	Modeling the Effects of EGR and Injection Pressure on Soot Formation in a High-Speed Direct-Injection (HSDI) Diesel Engine Using a Multi-Step Phenomenological Soot Model **2005**,		48
117	Computational Optimization of Internal Combustion Engines **2011**,		46
116	Optimization of fuel/air mixture formation for stoichiometric diesel combustion using a 2-spray-angle group-hole nozzle. *Fuel*, **2009**, 88, 843-852	7.1	46
115	A Progress Review on Soot Experiments and Modeling in the Engine Combustion Network (ECN). *SAE International Journal of Engines*, **2016**, 9, 883-898	2.4	45
114	A generalized renormalization group turbulence model and its application to a light-duty diesel engine operating in a low-temperature combustion regime. *International Journal of Engine Research* , **2013**, 14, 279-292	2.7	44
113	Effects of Injection Pressure and Nozzle Geometry on Spray SMD and D.I. Emissions **1995**,		43
112	A comprehensive modeling study of in-cylinder fluid flows in a high-swirl, light-duty optical diesel engine. *Computers and Fluids*, **2014**, 105, 113-124	2.8	42
111	An adaptive multi-grid chemistry (AMC) model for efficient simulation of HCCI and DI engine combustion. *Combustion Theory and Modelling*, **2009**, 13, 83-104	1.5	42
110	Effect of biodiesel saturation on soot formation in diesel engines. *Fuel*, **2016**, 175, 240-248	7.1	41
109	Application of A Multiple-Step Phenomenological Soot Model to HSDI Diesel Multiple Injection Modeling **2005**,		41
108	Effect of Injector Nozzle Hole Size and Number on Spray Characteristics and the Performance of a Heavy Duty D.I. Diesel Engine **1996**,		41
107	Modeling of combustion phasing of a reactivity-controlled compression ignition engine for control applications. *International Journal of Engine Research*, **2016**, 17, 421-435	2.7	40
106	Modeling Soot Formation Using Reduced Polycyclic Aromatic Hydrocarbon Chemistry in n-Heptane Lifted Flames With Application to Low Temperature Combustion. *Journal of Engineering for Gas Turbines and Power*, **2009**, 131,	1.7	40
105	Application of a semi-detailed soot modeling approach for conventional and low temperature diesel combustion Part I: Model performance. *Fuel*, **2015**, 139, 757-770	7.1	39
104	A study of direct and Krylov iterative sparse solver techniques to approach linear scaling of the integration of chemical kinetics with detailed combustion mechanisms. *Combustion and Flame*, **2014**, 161, 1180-1195	5.3	39

103	Pressure Oscillation and Chemical Kinetics Coupling during Knock Processes in Gasoline Engine Combustion. *Energy & Fuels*, **2012**, 26, 7107-7119	4.1	38
102	An Experimental Investigation on the Effect of Post-Injection Strategies on Combustion and Emissions in the Low-Temperature Diesel Combustion Regime. *Journal of Engineering for Gas Turbines and Power*, **2007**, 129, 279-286	1.7	38
101	A Comprehensive Combustion Model for Biodiesel-Fueled Engine Simulations **2013**,		37
100	Gas-phase unsteadiness and its influence on droplet vaporization in sub- and super-critical environments. *International Journal of Heat and Mass Transfer*, **2001**, 44, 3081-3093	4.9	37
99	Isobutanol as Both Low Reactivity and High Reactivity Fuels with Addition of Di-Tert Butyl Peroxide (DTBP) in RCCI Combustion. *SAE International Journal of Fuels and Lubricants*, **2015**, 8, 329-343	1.8	35
98	Natural Gas for High Load Dual-Fuel Reactivity Controlled Compression Ignition in Heavy-Duty Engines. *Journal of Energy Resources Technology, Transactions of the ASME*, **2015**, 137,	2.6	34
97	Validation of Mesh- and Timestep- Independent Spray Models for Multi-Dimensional Engine CFD Simulation. *SAE International Journal of Fuels and Lubricants*, **2010**, 3, 277-302	1.8	34
96	Numerical Predictions of Diesel Flame Lift-off Length and Soot Distributions under Low Temperature Combustion Conditions **2008**,		34
95	Simulation of supercritical fuel injection with condensation. *International Journal of Heat and Mass Transfer*, **2014**, 79, 1070-1086	4.9	33
94	A numerical study of the effects of reformer gas composition on the combustion and emission characteristics of a natural gas/diesel RCCI engine enriched with reformer gas. *Fuel*, **2017**, 209, 742-753	7.1	33
93	Numerical Study of RCCI and HCCI Combustion Processes Using Gasoline, Diesel, iso-Butanol and DTBP Cetane Improver. *SAE International Journal of Engines*, **2015**, 8, 831-845	2.4	32
92	A CFD Study of Post Injection Influences on Soot Formation and Oxidation under Diesel-Like Operating Conditions. *SAE International Journal of Engines*, **2014**, 7, 694-713	2.4	32
91	Simulating cavitating liquid jets using a compressible and equilibrium two-phase flow solver. *International Journal of Multiphase Flow*, **2014**, 63, 52-67	3.6	32
90	Investigation of the Roles of Flame Propagation, Turbulent Mixing, and Volumetric Heat Release in Conventional and Low Temperature Diesel Combustion. *Journal of Engineering for Gas Turbines and Power*, **2011**, 133,	1.7	32
89	Development of a thermodynamically consistent, robust and efficient phase equilibrium solver and its validations. *Fuel*, **2014**, 115, 1-16	7.1	31
88	Effects of Engine Operating Parameters on near Stoichiometric Diesel Combustion Characteristics **2007**,		31
87	Improved atomization, collision and sub-grid scale momentum coupling models for transient vaporizing engine sprays. *International Journal of Multiphase Flow*, **2016**, 79, 107-123	3.6	30
86	Effects of late intake valve closing (LIVC) and rebreathing valve strategies on diesel engine performance and emissions at low loads. *Applied Thermal Engineering*, **2016**, 98, 310-319	5.8	30

85	The effect of intake valve alignment on swirl generation in a DI diesel engine. *Experimental Thermal and Fluid Science*, **1999**, 20, 94-103	3	30
84	Comprehensive analysis of exergy destruction sources in different engine combustion regimes. *Energy*, **2018**, 149, 697-708	7.9	29
83	Experimental Investigation of Piston Heat Transfer in a Light Duty Engine Under Conventional Diesel, Homogeneous Charge Compression Ignition, and Reactivity Controlled Compression Ignition Combustion Regimes. *SAE International Journal of Engines*, **2014**, 7, 375-386	2.4	29
82	Exploring the Role of Reactivity Gradients in Direct Dual Fuel Stratification. *SAE International Journal of Engines*, **2016**, 9, 1036-1048	2.4	29
81	Modeling the Effect of Injector Nozzle-Hole Layout on Diesel Engine Fuel Consumption and Emissions. *Journal of Engineering for Gas Turbines and Power*, **2008**, 130,	1.7	28
80	Comparisons of Diesel PCCI Combustion Simulations Using a Representative Interactive Flamelet Model and Direct Integration of CFD With Detailed Chemistry. *Journal of Engineering for Gas Turbines and Power*, **2007**, 129, 252-260	1.7	28
79	Piston geometry effects in a light-duty, swirl-supported diesel engine: Flow structure characterization. *International Journal of Engine Research*, **2018**, 19, 1079-1098	2.7	27
78	Kinetic and Numerical Study on the Effects of Di-tert-butyl Peroxide Additive on the Reactivity of Methanol and Ethanol. *Energy & Fuels*, **2014**, 28, 5480-5488	4.1	26
77	A New High Pressure Droplet Vaporization Model for Diesel Engine Modeling **1995**,		26
76	Modeling soot emissions from wall films in a direct-injection spark-ignition engine. *International Journal of Engine Research*, **2015**, 16, 994-1013	2.7	25
75	A Numerical Investigation of Transient Flow and Cavitation Within Minisac and Valve-Covered Orifice Diesel Injector Nozzles. *Journal of Engineering for Gas Turbines and Power*, **2010**, 132,	1.7	24
74	Effects of Exhaust Gas Recirculation and Boost Pressure on Reactivity Controlled Compression Ignition Engine at High Load Operating Conditions. *Journal of Energy Resources Technology, Transactions of the ASME*, **2015**, 137,	2.6	23
73	The role of the diffusion-limited injection in direct dual fuel stratification. *International Journal of Engine Research*, **2017**, 18, 351-365	2.7	22
72	Optimization of a HSDI Diesel Engine for Passenger Cars Using a Multi-Objective Genetic Algorithm and Multi-Dimensional Modeling. *SAE International Journal of Engines*, **2009**, 2, 691-713	2.4	22
71	Experimental investigations of gasoline partially premixed combustion with an exhaust rebreathing valve strategy at low loads. *Applied Thermal Engineering*, **2016**, 103, 832-841	5.8	22
70	Effect of Radiation on Diesel Engine Combustion and Heat Transfer. *Journal of Thermal Science and Technology*, **2009**, 4, 86-97	0.6	20
69	Stoichiometric Combustion in a HSDI Diesel Engine to Allow Use of a Three-way Exhaust Catalyst **2006**,		20
68	Experimental Investigation of Intake Condition and Group-Hole Nozzle Effects on Fuel Economy and Combustion Noise for Stoichiometric Diesel Combustion in an HSDI Diesel Engine. *SAE International Journal of Engines*, **2009**, 2, 1054-1067	2.4	19

67	Numerical investigation of radiative heat transfer in internal combustion engines. *Applied Energy*, **2019**, 235, 147-163	10.7	19
66	An Experimental and Numerical Study on the Effects of Fuel Properties on the Combustion and Emissions of Low-Temperature Combustion Diesel Engines. *Combustion Science and Technology*, **2014**, 186, 1795-1815	1.5	18
65	Adaptive Injection Strategies (AIS) for Ultra-Low Emissions Diesel Engines **2008**,		18
64	Reactivity controlled compression ignition engine: Pathways towards commercial viability. *Applied Energy*, **2021**, 282, 116174	10.7	18
63	Simulating low temperature diesel combustion with improved spray models. *International Journal of Thermal Sciences*, **2009**, 48, 1786-1799	4.1	17
62	A study of using E10 and E85 under direct dual fuel stratification (DDFS) strategy: Exploring the effects of the reactivity-stratification and diffusion-limited injection on emissions and performance in an E10/diesel DDFS engine. *Fuel*, **2020**, 275, 117870	7.1	16
61	An Efficient Level-Set Flame Propagation Model for Hybrid Unstructured Grids Using the G-Equation. *SAE International Journal of Engines*, **2016**, 9, 1409-1424	2.4	16
60	Measured and Predicted Soot Particle Emissions from Natural Gas Engines **2015**,		16
59	Application of Generalized RNG Turbulence Model to Flow in Motored Single-Cylinder PFI Engine. *Engineering Applications of Computational Fluid Mechanics*, **2013**, 7, 486-495	4.5	16
58	MODELING OF GROUP-HOLE-NOZZLE SPRAYS USING GRID-SIZE-, HOLE-LOCATION-, AND TIME-STEP-INDEPENDENT MODELS. *Small Group Research*, **2009**, 19, 567-582	2.5	16
57	Comparison of Diesel Combustion CFD Models and Evaluation of the Effects of Model Constants **2012**,		15
56	A gas jet superposition model for CFD modeling of group-hole nozzle sprays. *International Journal of Heat and Fluid Flow*, **2009**, 30, 1193-1201	2.4	15
55	Modeling Early Injection Processes in HSDI Diesel Engines **2006**,		14
54	Numerical Modeling of Diesel Engine Combustion and Emissions Under HCCI-Like Conditions With High EGR Levels **2003**,		14
53	Multiphase dynamic flash simulations using entropy maximization and application to compressible flow with phase change. *AICHE Journal*, **2014**, 60, 3013-3024	3.6	13
52	Simulation and analysis of group-hole nozzle sprays using a gas jet superposition model. *Fuel*, **2010**, 89, 3758-3772	7.1	13
51	An equilibrium phase spray model for high-pressure fuel injection and engine combustion simulations. *International Journal of Engine Research*, **2019**, 20, 203-215	2.7	13
50	Investigation of real gas effects on combustion and emissions in internal combustion engines and implications for development of chemical kinetics mechanisms. *International Journal of Engine Research*, **2018**, 19, 269-281	2.7	12

49	Condensation processes in a motoring engine. *Journal of Supercritical Fluids*, **2014**, 90, 84-100	4.2	12
48	Reaction Mechanisms and HCCI Combustion Processes of Mixtures of n-Heptane and the Butanols. *Frontiers in Mechanical Engineering*, **2015**, 1,	2.6	12
47	Development of an Oil Gallery Cooling Model for Internal Combustion Engines Considering the Cocktail Shaker Effect. *Numerical Heat Transfer; Part A: Applications*, **2009**, 56, 563-578	2.3	12
46	Development of an Improved NOx Reaction Mechanism for Low Temperature Diesel Combustion Modeling. *SAE International Journal of Engines*, **2008**, 1, 1105-1117	2.4	12
45	Development of a Semi-implicit Solver for Detailed Chemistry in Internal Combustion Engine Simulations. *Journal of Engineering for Gas Turbines and Power*, **2007**, 129, 271-278	1.7	12
44	Application of a semi-detailed soot modeling approach for conventional and low temperature diesel combustion Part II: Model sensitivity. *Fuel*, **2015**, 139, 771-779	7.1	11
43	Comparison of Linear, Non-Linear and Generalized RNG-Based k-epsilon Models for Turbulent Diesel Engine Flows **2017**,		11
42	Efficient Multidimensional Simulation of HCCI and DI Engine Combustion with Detailed Chemistry **2009**,		10
41	Application of an Equilibrium-Phase Spray Model to Multicomponent Gasoline Direct Injection. *Energy & Fuels*, **2019**, 33, 3565-3575	4.1	9
40	Reduction in NOx and CO Emissions in Stoichiometric Diesel Combustion Using a Three-Way Catalyst. *Journal of Engineering for Gas Turbines and Power*, **2010**, 132,	1.7	9
39	Fuel Injection and Mean Swirl Effects on Combustion and Soot Formation in Heavy Duty Diesel Engines **2007**,		9
38	Direct droplet production from a liquid film: a new gas-assisted atomization mechanism. *Journal of Fluid Mechanics*, **1998**, 375, 363-381	3.7	9
37	Combustion and emission characteristics of converging group-hole nozzle under lean engine operating conditions. *Fuel*, **2011**, 90, 3259-3267	7.1	8
36	Improving Diesel Engine Performance Using Low and High Pressure Split Injections for Single Heat Release and Two-Stage Combustion **2010**,		8
35	Grand Challenges in Engine and Automotive Engineering. *Frontiers in Mechanical Engineering*, **2015**, 1,	2.6	7
34	On regular and retrograde condensation in multiphase compressible flows. *International Journal of Multiphase Flow*, **2014**, 64, 85-96	3.6	7
33	Diesel engine emissions and combustion predictions using advanced mixing models applicable to fuel sprays. *Combustion Theory and Modelling*, **2010**, 14, 715-746	1.5	7
32	Modeling Combustion and Emissions of HSDI Diesel Engines Using Injectors with Different Included Spray Angles **2006**,		7

31	An Investigation of the Effects of the Piston Bowl Geometries of a Heavy-Duty Engine on Performance and Emissions Using Direct Dual Fuel Stratification Strategy, and Proposing Two New Piston Profiles. *SAE International Journal of Engines*,13,	2.4	7
30	Development of micro-machining techniques for air-assisted liquid atomization. *Experimental Thermal and Fluid Science*, **1999**, 20, 11-18	3	6
29	Bowl Geometry Effects on Turbulent Flow Structure in a Direct Injection Diesel Engine **2018**,		6
28	Investigation of Cold Starting and Combustion Mode Switching as Methods to Improve Low Load RCCI Operation. *Journal of Engineering for Gas Turbines and Power*, **2016**, 138,	1.7	5
27	Computational study of a two-stroke direct-injection reactivity-controlled compression ignition engine. *Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering*, **2015**, 229, 980-991	1.4	5
26	Improving the Efficiency of Low Temperature Combustion Engines Using a Chamfered Ring-Land. *Journal of Engineering for Gas Turbines and Power*, **2015**, 137,	1.7	5
25	Investigating Fuel Condensation Processes in Low Temperature Combustion Engines. *Journal of Engineering for Gas Turbines and Power*, **2015**, 137,	1.7	5
24	A Continuous Multicomponent Fuel Flame Propagation and Chemical Kinetics Model. *Journal of Engineering for Gas Turbines and Power*, **2010**, 132,	1.7	5
23	Integration of a Continuous Multi-Component Fuel Evaporation Model with an Improved G-Equation Combustion and Detailed Chemical Kinetics Model with Application to GDI Engines **2009**,		5
22	High-Pressure Spray and Combustion Modeling Using Continuous Thermodynamics for Diesel Fuels **2001**,		5
21	Meeting EURO6 emission regulations by multi-objective optimization of the injection strategy of two direct injectors in a DDFS engine. *Energy*, **2021**, 229, 120737	7.9	5
20	Computationally Efficient Simulation of Multicomponent Fuel Combustion Using a Sparse Analytical Jacobian Chemistry Solver and High-Dimensional Clustering. *Journal of Engineering for Gas Turbines and Power*, **2014**, 136,	1.7	4
19	Reduction of NOx and CO Emissions in Stoichiometric Diesel Combustion Using a 3-Way Catalyst **2009**,		4
18	Thermodynamic Energy and Exergy Analysis of Low-Temperature Combustion Strategies. *SAE International Journal of Engines*,14,	2.4	4
17	Development of a reduced tri-propylene glycol monomethyl ether/n-hexadecane/poly-aromatic hydrocarbon mechanism and its application for soot prediction. *International Journal of Engine Research*, **2016**, 17, 969-982	2.7	3
16	Improved Chemical Kinetics Numerics for the Efficient Simulation of Advanced Combustion Strategies. *SAE International Journal of Engines*, **2014**, 7, 243-255	2.4	3
15	Piston Bowl Geometry Effects on Combustion Development in a High-Speed Light-Duty Diesel Engine		3
14	Improving the Efficiency of Low Temperature Combustion Engines Using a Chamfered Ring-Land **2014**,		2

List of Publications

13	A Two-Zone Multigrid Model for SI Engine Combustion Simulation Using Detailed Chemistry. *Journal of Combustion*, **2010**, 2010, 1-12	0.8	2
12	Modeling the Effects of Variable Intake Valve Timing on Diesel HCCI Combustion at Varying Load, Speed and Boost Pressures **2005**, 1		2
11	A Triangulated Lagrangian Ignition Kernel Model with Detailed Kinetics for Modeling Spark Ignition with the G-Equation-Part I: Geometric Aspects **2018**,		1
10	Investigating Fuel Condensation Processes in Low Temperature Combustion Engines **2014**,		1
9	Multi-dimensional Modelling of Diesel Combustion: Review. *Mechanical Engineering Series*, **2010**, 207-246	0.3	1
8	Multi-dimensional Modelling of Diesel Combustion: Applications. *Mechanical Engineering Series*, **2010**, 247-282	0.3	1
7	Numerical Study of Fuel Composition Effects on Low Temperature Diesel Combustion With a Discrete Multi-Component Vaporization Model **2009**,		1
6	Multidimensional Simulation **2014**, 1-19		
5	Reciprocating Engines: Diesel and Gas **2014**, 1507-1517		
4	Multi-dimensional Modelling of Diesel Combustion: A Review. *Mechanical Engineering Series*, **2022**, 279-319	0.3	
3	Multi-dimensional Modelling of Diesel Combustion: Applications. *Mechanical Engineering Series*, **2022**, 321-358	0.3	
2	Simulation of the High-Pressure Combustion Process in Diesel Engines **2020**, 731-768		
1	Modeling of High-Pressure Fuel Injection in Internal Combustion Engines. *Energy, Environment, and Sustainability*, **2019**, 109-143	0.8	