

Francesco Contino

List of Publications by Year in descending order

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114
papers

3,506
citations

172386

29
h-index

175177

52
g-index

116
all docs

116
docs citations

116
times ranked

1977
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental study on ammonia/hydrogen/air combustion in spark ignition engine conditions. Fuel, 2020, 269, 117448.	3.4	238
2	An experimental and modeling study of ammonia with enriched oxygen content and ammonia/hydrogen laminar flame speed at elevated pressure and temperature. Proceedings of the Combustion Institute, 2021, 38, 2163-2174.	2.4	210
3	Experimental investigation on laminar burning velocities of ammonia/hydrogen/air mixtures at elevated temperatures. Fuel, 2020, 263, 116653.	3.4	202
4	Extension of the Eddy Dissipation Concept for turbulence/chemistry interactions to MILD combustion. Fuel, 2016, 163, 98-111.	3.4	180
5	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
6	Modeling of ammonia combustion at low pressure. Combustion and Flame, 2012, 159, 2799-2805.	2.8	129
7	Experimental and numerical study, under LTC conditions, of ammonia ignition delay with and without hydrogen addition. Proceedings of the Combustion Institute, 2019, 37, 621-629.	2.4	119
8	Comparison of well-mixed and multiple representative interactive flamelet approaches for diesel spray combustion modelling. Combustion Theory and Modelling, 2014, 18, 65-88.	1.0	117
9	A robust and efficient stepwise regression method for building sparse polynomial chaos expansions. Journal of Computational Physics, 2017, 332, 461-474.	1.9	97
10	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
11	Experimental investigation on ammonia combustion behavior in a spark-ignition engine by means of laminar and turbulent expanding flames. Proceedings of the Combustion Institute, 2021, 38, 5859-5868.	2.4	73
12	Energy and Economic Costs of Chemical Storage. Frontiers in Mechanical Engineering, 2020, 6, .	0.8	66
13	The effects of biomass syngas composition, moisture, tar loading and operating conditions on the combustion of a tar-tolerant HCCI (Homogeneous Charge Compression Ignition) engine. Energy, 2015, 87, 289-302.	4.5	61
14	Performance and Emissions of an Ammonia-Fueled SI Engine with Hydrogen Enrichment. , 0, , .		61
15	Ammonia-Hydrogen Blends in Homogeneous-Charge Compression-Ignition Engine. , 0, , .		57
16	Robust design optimization and stochastic performance analysis of a grid-connected photovoltaic system with battery storage and hydrogen storage. Energy, 2020, 213, 118798.	4.5	56
17	Combustion Characteristics of Ammonia in a Modern Spark-Ignition Engine. , 0, , .		56
18	A 22:1 Compression Ratio Ammonia-Hydrogen HCCI Engine: Combustion, Load, and Emission Performances. Frontiers in Mechanical Engineering, 2020, 6, .	0.8	51

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19	How can power-to-ammonia be robust? Optimization of an ammonia synthesis plant powered by a wind turbine considering operational uncertainties. <i>Fuel</i> , 2020, 266, 117049.	3.4	51
20	Waste heat recovery optimization in micro gas turbine applications using advanced humidified gas turbine cycle concepts. <i>Applied Energy</i> , 2017, 207, 218-229.	5.1	48
21	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. <i>Fuel</i> , 2014, 137, 179-184.	3.4	46
22	Combustion Characteristics of Tricomponent Fuel Blends of Ethyl Acetate, Ethyl Propionate, and Ethyl Butyrate in Homogeneous Charge Compression Ignition (HCCI). <i>Energy & Fuels</i> , 2011, 25, 1497-1503.	2.5	43
23	Surrogate-assisted robust design optimization and global sensitivity analysis of a directly coupled photovoltaic-electrolyzer system under techno-economic uncertainty. <i>Applied Energy</i> , 2019, 248, 310-320.	5.1	43
24	Experimental Characterization of Ethyl Acetate, Ethyl Propionate, and Ethyl Butanoate in a Homogeneous Charge Compression Ignition Engine. <i>Energy & Fuels</i> , 2011, 25, 998-1003.	2.5	41
25	A hyperparameters selection technique for support vector regression models. <i>Applied Soft Computing Journal</i> , 2017, 61, 139-148.	4.1	41
26	Experimental and modeling study of formaldehyde combustion in flames. <i>Combustion and Flame</i> , 2012, 159, 1814-1820.	2.8	40
27	New concept of spray saturation tower for micro Humid Air Turbine applications. <i>Applied Energy</i> , 2014, 130, 723-737.	5.1	38
28	HCCI engine operated with unscrubbed biomass syngas. <i>Fuel Processing Technology</i> , 2017, 157, 52-58.	3.7	37
29	Optimal waste heat recovery in micro gas turbine cycles through liquid water injection. <i>Applied Thermal Engineering</i> , 2014, 70, 846-856.	3.0	35
30	Experimental characterisation of a micro Humid Air Turbine: assessment of the thermodynamic performance. <i>Applied Thermal Engineering</i> , 2017, 118, 796-806.	3.0	34
31	Simulations of Advanced Combustion Modes Using Detailed Chemistry Combined with Tabulation and Mechanism Reduction Techniques. <i>SAE International Journal of Engines</i> , 0, 5, 185-196.	0.4	32
32	Toward Higher Micro Gas Turbine Efficiency and Flexibility—Humidified Micro Gas Turbines: A Review. <i>Journal of Engineering for Gas Turbines and Power</i> , 2018, 140, .	0.5	32
33	A multiscale combustion model formulation for NO predictions in hydrogen enriched jet flames. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 23436-23457.	3.8	30
34	T100 mGT converted into mHAT for domestic applications: Economic analysis based on hourly demand. <i>Applied Energy</i> , 2016, 164, 1019-1027.	5.1	29
35	Does humidification improve the micro Gas Turbine cycle? Thermodynamic assessment based on Sankey and Grassmann diagrams. <i>Applied Energy</i> , 2017, 204, 1163-1171.	5.1	29
36	Combustion and Emissions Characteristics of Valeric Biofuels in a Compression Ignition Engine. <i>Journal of Energy Engineering - ASCE</i> , 2014, 140, .	1.0	27

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37	Fouling propensity of high-phosphorus solid fuels: Predictive criteria and ash deposits characterisation of sunflower hulls with P/Ca-additives in a drop tube furnace. <i>Fuel</i> , 2016, 170, 16-26.	3.4	27
38	Robust design optimization of a photovoltaic-battery-heat pump system with thermal storage under aleatory and epistemic uncertainty. <i>Energy</i> , 2021, 229, 120692.	4.5	27
39	How sensitive is a dynamic ammonia synthesis process? Global sensitivity analysis of a dynamic Haber-Bosch process (for flexible seasonal energy storage). <i>Energy</i> , 2021, 232, 121016.	4.5	25
40	EGR control on operation of a tar tolerant HCCI engine with simulated syngas from biomass. <i>Applied Energy</i> , 2018, 227, 159-167.	5.1	24
41	Carbon capture on micro gas turbine cycles: Assessment of the performance on dry and wet operations. <i>Applied Energy</i> , 2017, 207, 243-253.	5.1	23
42	Humidified micro gas turbines for domestic users: An economic and primary energy savings analysis. <i>Energy</i> , 2016, 117, 429-438.	4.5	22
43	Screening Method for Fuels in Homogeneous Charge Compression Ignition Engines: Application to Valeric Biofuels. <i>Energy & Fuels</i> , 2017, 31, 607-614.	2.5	22
44	Assessment of On-the-Fly Chemistry Reduction and Tabulation Approaches for the Simulation of Moderate or Intense Low-Oxygen Dilution Combustion. <i>Energy & Fuels</i> , 2018, 32, 10121-10131.	2.5	20
45	Experimental Characterization of a T100 Micro Gas Turbine Converted to Full Humid Air Operation. <i>Energy Procedia</i> , 2014, 61, 2083-2088.	1.8	19
46	Spectral representation of stochastic field data using sparse polynomial chaos expansions. <i>Journal of Computational Physics</i> , 2018, 367, 109-120.	1.9	19
47	How to ensure the interpretability of experimental data in Rapid Compression Machines? A method to validate piston crevice designs. <i>Combustion and Flame</i> , 2018, 198, 393-411.	2.8	19
48	Whole-energy system models: The advisors for the energy transition. <i>Progress in Energy and Combustion Science</i> , 2020, 81, 100872.	15.8	19
49	The Role of Electrofuels under Uncertainties for the Belgian Energy Transition. <i>Energies</i> , 2021, 14, 4027.	1.6	19
50	Advanced Humidified Gas Turbine Cycle Concepts Applied to Micro Gas Turbine Applications for Optimal Waste Heat Recovery. <i>Energy Procedia</i> , 2017, 105, 1712-1718.	1.8	18
51	Reducing waste heat to the minimum: Thermodynamic assessment of the M-power cycle concept applied to micro Gas Turbines. <i>Applied Energy</i> , 2020, 279, 115898.	5.1	18
52	Experimental Investigation of the Effect of Steam Dilution on the Combustion of Methane for Humidified Micro Gas Turbine Applications. <i>Combustion Science and Technology</i> , 2016, 188, 1199-1219.	1.2	17
53	CFD simulations of Rapid Compression Machines using detailed chemistry: Impact of multi-dimensional effects on the auto-ignition of the iso-octane. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 383-391.	2.4	17
54	CFD simulations of Rapid Compression Machines using detailed chemistry: Evaluation of the "crevice containment" concept. <i>Combustion and Flame</i> , 2018, 189, 225-239.	2.8	17

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55	Techno-economic feasibility study of a solar-powered distributed cogeneration system producing power and distillate water: Sensitivity and exergy analysis. <i>Renewable Energy</i> , 2020, 150, 1089-1097.	4.3	17
56	How can renewable hydrogen compete with diesel in public transport? Robust design optimization of a hydrogen refueling station under techno-economic and environmental uncertainty. <i>Applied Energy</i> , 2022, 312, 118694.	5.1	17
57	T100 Micro Gas Turbine Converted to Full Humid Air Operation: Test Rig Evaluation. , 2014, , .		16
58	Development and application in Aspen Plus of a process simulation model for the anaerobic digestion of vinasses in UASB reactors: Hydrodynamics and biochemical reactions. <i>Journal of Environmental Chemical Engineering</i> , 2020, 8, 103540.	3.3	16
59	Detailed Kinetic Analysis of HCCI Combustion Using a New Multi-Zone Model and CFD Simulations. <i>SAE International Journal of Engines</i> , 0, 6, 1594-1609.	0.4	15
60	Multifuel CHP HCCI Engine towards Flexible Power-to-fuel: Numerical Study of Operating Range. <i>Energy Procedia</i> , 2017, 105, 1532-1538.	1.8	15
61	Robust Operational Optimization of a Typical micro Gas Turbine. <i>Energy Procedia</i> , 2019, 158, 5795-5803.	1.8	15
62	Engine Performances and Emissions of Second-Generation Biofuels in Spark Ignition Engines: The Case of Methyl and Ethyl Valerates. , 0, , .		14
63	Application of Bound-to-Bound Data Collaboration approach for development and uncertainty quantification of a reduced char combustion model. <i>Fuel</i> , 2018, 232, 769-779.	3.4	14
64	Impact of Mileage on Particle Number Emission Factors for EURO5 and EURO6 Diesel Passenger Cars. <i>Atmospheric Environment</i> , 2021, 244, 117975.	1.9	14
65	Process simulation and techno-economic assessment of vinasse-to-biogas in Cuba: Deterministic and uncertainty analysis. <i>Chemical Engineering Research and Design</i> , 2021, 169, 33-45.	2.7	14
66	Simplified elements for wind-tunnel measurements with type-III-terrain atmospheric boundary layer. Measurement: <i>Journal of the International Measurement Confederation</i> , 2016, 91, 590-600.	2.5	12
67	Tar Tolerant HCCI Engine Fuelled with Biomass Syngas: Combustion Control Through EGR. <i>Energy Procedia</i> , 2017, 105, 1764-1770.	1.8	12
68	CO Emission Measurements and Performance Analysis of 10 kW and 20 kW Wood Stoves. <i>Energy Procedia</i> , 2014, 61, 2301-2306.	1.8	11
69	Transient Simulations of a T100 Micro Gas Turbine Converted Into a Micro Humid Air Turbine. , 2015, , .		11
70	Exhaust Gas Recirculation on Humidified Flexible Micro Gas Turbines for Carbon Capture Applications. , 2016, , .		11
71	Ash Characterization of Four Residual Wood Fuels in a 100 kW_{th} Circulating Fluidized Bed Reactor Including the Use of Kaolin and Halloysite Additives. <i>Energy & Fuels</i> , 2016, 30, 8304-8315.	2.5	11
72	On the application of tabulated dynamic adaptive chemistry in ethylene-fueled supersonic combustion. <i>Combustion and Flame</i> , 2018, 197, 265-275.	2.8	11

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73	Is There a Future for Small-Scale Cogeneration in Europe? Economic and Policy Analysis of the Internal Combustion Engine, Micro Gas Turbine and Micro Humid Air Turbine Cycles. <i>Energies</i> , 2019, 12, 413.	1.6	11
74	Uncertainty quantification from raw measurements to post-processed data: A general methodology and its application to a homogeneous-charge compressionâ€“ignition engine. <i>International Journal of Engine Research</i> , 2020, 21, 1709-1737.	1.4	10
75	Surrogate-Assisted Modeling and Robust Optimization of a Micro Gas Turbine Plant With Carbon Capture. <i>Journal of Engineering for Gas Turbines and Power</i> , 2020, 142, .	0.5	10
76	A Study on the Performance of Steam Injection in a Typical Micro Gas Turbine. , 2013, , .		9
77	Thermodynamic Analysis of Water Injection in a Micro Gas Turbine: Sankey and Grassmann Diagrams. <i>Energy Procedia</i> , 2017, 105, 1414-1419.	1.8	9
78	Predicting octane numbers relying on principal component analysis and artificial neural network. <i>Computers and Chemical Engineering</i> , 2022, 161, 107784.	2.0	9
79	Comparison of Biodiesel Production Scenarios with Coproduction of Triacetin According to Energy and GHG Emissions. <i>Energy Procedia</i> , 2014, 61, 1852-1859.	1.8	8
80	T100 Micro Gas Turbine Converted to Full Humid Air Operation: A Thermodynamic Performance Analysis. , 2015, , .		8
81	Operational Optimization of a Typical micro Gas Turbine. <i>Energy Procedia</i> , 2017, 142, 1653-1660.	1.8	8
82	Optimal design and operating strategy of a carbon-clean micro gas turbine for combined heat and power applications. <i>International Journal of Greenhouse Gas Control</i> , 2019, 88, 469-481.	2.3	8
83	Prediction of the Octane Number: A Bayesian Pseudo-Component Method. <i>Energy & Fuels</i> , 2020, 34, 12598-12605.	2.5	8
84	Ignition Study of an Oxygenated and High-Alkene Light Petroleum Fraction Produced from Automotive Shredder Residues. <i>Energy & Fuels</i> , 2019, 33, 5664-5672.	2.5	7
85	Micro Gas Turbine Cycle Humidification for Increased Flexibility: Numerical and Experimental Validation of Different Steam Injection Models. <i>Journal of Engineering for Gas Turbines and Power</i> , 2019, 141, .	0.5	7
86	Analysis of the dynamics of a slider-crank mechanism locally actuated with an act-and-wait controller. <i>Mechanism and Machine Theory</i> , 2021, 159, 104253.	2.7	7
87	RHEIA: Robust design optimization of renewable Hydrogen and dErived energy cArrier systems. <i>Journal of Open Source Software</i> , 2022, 7, 4370.	2.0	7
88	Towards the Use of Eulerian Field PDF Methods for Combustion Modeling in IC Engines. <i>SAE International Journal of Engines</i> , 0, 7, 286-296.	0.4	6
89	CFD-aided benchmark assessment of coal devolatilization one-step models in oxy-coal combustion conditions. <i>Fuel Processing Technology</i> , 2016, 154, 27-36.	3.7	5
90	Collaboration of simulations and experiments for development and uncertainty quantification of a reduced char combustion model. <i>Energy Procedia</i> , 2017, 120, 500-507.	1.8	5

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91	Study of the HCCI Running Zone Using Ethyl Acetate. , 0, , .		4
92	Economic Analysis of a Micro Humid Air Turbine for Domestic Applications. Energy Procedia, 2014, 61, 1476-1482.	1.8	4
93	Towards Higher Micro Gas Turbine Efficiency and Flexibility: Humidified MGTS " A Review. , 2017, , .		4
94	Comparison of metaheuristics algorithms on robust design optimization of a plain-fin-tube heat exchanger. , 2017, , .		4
95	Emission Measurement of Buses Fueled with Biodiesel Blends during On-Road Testing. Energies, 2020, 13, 5267.	1.6	4
96	Recuperator Performance Assessment in Humidified Micro Gas Turbine Applications Using Experimental Data Extended With Preliminary Support Vector Regression Model Analysis. Journal of Engineering for Gas Turbines and Power, 2021, 143, .	0.5	4
97	Sensitivity Analysis and Uncertainty Quantification for the Ffowcs Williams-Hawkings Equation. , 2017, , .		4
98	Carbon Capture on a Micro Gas Turbine: Assessment of the Performance. Energy Procedia, 2017, 105, 4046-4052.	1.8	3
99	Uncertainty quantification for the aeroacoustics of rotating blades in the time domain. Applied Acoustics, 2018, 139, 57-68.	1.7	3
100	Prediction of the PIONA and oxygenate composition of unconventional fuels with the Pseudo-Component Property Estimation (PCPE) method. Application to an Automotive Shredder Residues-derived gasoline. , 2018, , .		3
101	Multi-Fidelity Design Optimisation of a Solenoid-Driven Linear Compressor. Actuators, 2020, 9, 38.	1.2	3
102	Experimental Characterisation of a Humidified T100 Micro Gas Turbine. , 2016, , .		2
103	Carbon Clean Combined Heat and Power Production from micro Gas Turbines: Thermodynamic Analysis of Different Scenarios. Energy Procedia, 2017, 142, 1622-1628.	1.8	2
104	Micro Gas Turbine Cycle Humidification for Increased Flexibility: Numerical and Experimental Validation of Different Steam Injection Models. , 2018, , .		2
105	Uncertainty quantification in industrial turbo-machinery design using sparse polynomial chaos expansions. , 2018, , .		2
106	Techno-economic uncertainty quantification and robust design optimization of a directly coupled photovoltaic-electrolyzer system. Energy Procedia, 2019, 158, 1750-1756.	1.8	2
107	On the refinement of the rotation rate based Smagorinsky model using velocity field gradients. Physics of Fluids, 2017, 29, 105109.	1.6	1
108	Humidified Micro Gas Turbine for Carbon Capture Applications: Preliminary Experimental Results With CO2 Injection. , 2018, , .		1

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109	A correction technique for spurious signals from the permeable Ffowcs Williams-Hawkings equation. , 2018, , .		1
110	Taxonomy of the Fuels in a Whole-Energy System. Frontiers in Energy Research, 2021, 9, .	1.2	1
111	Experimental Investigation of the Dynamics of a Slider-Crank Mechanism With Local Linear Force Input. Journal of Applied Mechanics, Transactions ASME, 2022, 89, .	1.1	1
112	Towards real time transient mGT performance assessment: effective prediction using accurate component modelling techniques. Journal of the Global Power and Propulsion Society, 0, 6, 96-105.	0.8	1
113	Robust design optimization of a renewable-powered demand with energy storage using imprecise probabilities. E3S Web of Conferences, 2021, 238, 10004.	0.2	0
114	Optimization in probabilistic domains: an engineering approach. , 2020, , 391-414.		0