

J C PÃ¡scoa

List of Publications by Year in descending order

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135
papers

1,765
citations

331642

21
h-index

361001

35
g-index

136
all docs

136
docs citations

136
times ranked

1184
citing authors

#	ARTICLE	IF	CITATIONS
1	Numerical modeling of the distribution of virus carrying saliva droplets during sneeze and cough. <i>Physics of Fluids</i> , 2020, 32, 083305.	4.0	168
2	XFOIL vs CFD performance predictions for high lift low Reynolds number airfoils. <i>Aerospace Science and Technology</i> , 2016, 52, 207-214.	4.8	123
3	Heat generation mechanisms of DBD plasma actuators. <i>Experimental Thermal and Fluid Science</i> , 2018, 90, 55-65.	2.7	69
4	Analysis of PEM (Polymer Electrolyte Membrane) fuel cell cathode two-dimensional modeling. <i>Energy</i> , 2014, 68, 478-494.	8.8	64
5	Modified split-potential model for modeling the effect of DBD plasma actuators in high altitude flow control. <i>Current Applied Physics</i> , 2014, 14, 1160-1170.	2.4	56
6	Comparison of DBD plasma actuators flow control authority in different modes of actuation. <i>Aerospace Science and Technology</i> , 2018, 78, 183-196.	4.8	50
7	High altitude propeller design and analysis. <i>Aerospace Science and Technology</i> , 2015, 45, 398-407.	4.8	45
8	Implementation of the classical plasma fluid model for simulation of dielectric barrier discharge (DBD) actuators in OpenFOAM. <i>Computers and Fluids</i> , 2016, 128, 77-90.	2.5	45
9	Two-dimensional numerical modeling of interaction of micro-shock wave generated by nanosecond plasma actuators and transonic flow. <i>Journal of Computational and Applied Mathematics</i> , 2014, 270, 401-416.	2.0	44
10	Numerical design and analysis of a multi-DBD actuator configuration for the experimental testing of ACHEON nozzle model. <i>Aerospace Science and Technology</i> , 2015, 41, 259-273.	4.8	41
11	Three-dimensional effects of curved plasma actuators in quiescent air. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	38
12	MAAT – Promising innovative design and green propulsive concept for future airship's transport. <i>Aerospace Science and Technology</i> , 2014, 35, 1-14.	4.8	35
13	Assessment of RANS turbulence models for numerical study of laminar-turbulent transition in convection heat transfer. <i>International Journal of Heat and Mass Transfer</i> , 2017, 115, 1288-1308.	4.8	33
14	Experimental Analysis of Dielectric Barrier Discharge Plasma Actuators Thermal Characteristics Under External Flow Influence. <i>Journal of Heat Transfer</i> , 2018, 140, .	2.1	33
15	Numerical modeling of electrostatic spray painting transfer processes in rotary bell cup for automotive painting. <i>International Journal of Heat and Fluid Flow</i> , 2019, 80, 108499.	2.4	33
16	A critical review of propulsion concepts for modern airships. <i>Open Engineering</i> , 2012, 2, .	1.6	32
17	A hybrid pressure-density based algorithm for the Euler equations at all Mach number regimes. <i>International Journal for Numerical Methods in Fluids</i> , 2012, 70, 961-976.	1.6	27
18	A pressure-based high resolution numerical method for resistive MHD. <i>Journal of Computational Physics</i> , 2014, 275, 323-345.	3.8	27

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19	Validation of New Formulations for Propeller Analysis. Journal of Propulsion and Power, 2015, 31, 467-477.	2.2	27
20	A new plasma actuator configuration for improved efficiency: the stair-shaped dielectric barrier discharge actuator. Journal Physics D: Applied Physics, 2019, 52, 385201.	2.8	26
21	A pressure-based method with AUSM-type fluxes for MHD flows at arbitrary Mach numbers. International Journal for Numerical Methods in Fluids, 2013, 72, 1165-1182.	1.6	23
22	The Influence of Surface Temperature on Coanda Effect. Energy Procedia, 2014, 45, 626-634.	1.8	23
23	Numerical analysis of charged droplets size distribution in the electrostatic coating process: Effect of different operational conditions. Physics of Fluids, 2021, 33, .	4.0	22
24	A review of thrust-vectoring in support of a V/STOL non-moving mechanical propulsion system. Open Engineering, 2013, 3, .	1.6	21
25	Numerical Modeling of Stall and Poststall Events of a Single Pitching Blade of a Cycloidal Rotor. Journal of Fluids Engineering, Transactions of the ASME, 2019, 141, .	1.5	21
26	A fast iterative inverse method for turbomachinery blade design. Mechanics Research Communications, 2009, 36, 630-637.	1.8	20
27	Geometrical Parameters Influencing the Aerodynamic Efficiency of a Small-Scale Self-Pitch High-Solidity VAWT. Journal of Solar Energy Engineering, Transactions of the ASME, 2016, 138, .	1.8	20
28	JBLADE: a Propeller Design and Analysis Code. , 2013, , .		18
29	Analysis of transitional flow in 3D geometries using a novel phenomenological model. Aerospace Science and Technology, 2015, 45, 431-441.	4.8	17
30	Simultaneous ice detection and removal based on dielectric barrier discharge actuators. Sensors and Actuators A: Physical, 2020, 315, 112361.	4.1	17
31	Accuracy details in realistic CFD modeling of an industrial centrifugal pump in direct and reverse modes. Journal of Thermal Science, 2010, 19, 491-499.	1.9	16
32	An innovative experimental on-road testing method and its demonstration on a prototype vehicle. Journal of Mechanical Science and Technology, 2012, 26, 1663-1670.	1.5	16
33	Analytical modeling of a cyclorotor in hovering state. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2015, 229, 2163-2177.	1.3	16
34	Numerical analysis of real gas MHD flow on two-dimensional self-field MPD thrusters. Acta Astronautica, 2015, 112, 89-101.	3.2	16
35	ANN assisted flow modeling and analysis for a cyclorotor in ground effect. Aerospace Science and Technology, 2019, 95, 105495.	4.8	16
36	PECyT - Plasma Enhanced Cycloidal Thruster. , 2014, , .		15

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37	Numerical modeling of coanda effect in a novel propulsive system. International Journal of Multiphysics, 2014, 8, 181-202.	0.1	15
38	A plasmaâ€fluid model for EHD flow in DBD actuators and experimental validation. International Journal for Numerical Methods in Fluids, 2019, 90, 115-139.	1.6	14
39	Cycloidal rotor coupled with DBD plasma actuators for performance improvement. Aerospace Science and Technology, 2021, 110, 106468.	4.8	14
40	Could thermodynamics and heat and mass transfer research produce a fundamental step advance toward and significant reduction of SARS-COV-2 spread?. International Journal of Heat and Mass Transfer, 2021, 170, 120983.	4.8	14
41	An Experimental Study on Segmented-Encapsulated Electrode Dielectric-Barrier-Discharge Plasma Actuator for Mapping Ice Formation on a Surface: A Conceptual Analysis. Journal of Heat Transfer, 2021, 143, .	2.1	14
42	Parametric optimization of surface dielectric barrier discharge actuators for ice sensing application. Sensors and Actuators A: Physical, 2022, 335, 113391.	4.1	14
43	Fire-safe Airship System Design. SAE International Journal of Aerospace, 0, 5, 11-21.	4.0	13
44	Computational Fluid Dynamic Study on a Novel Propulsive System: ACHEON and Its Integration with an Unmanned Aerial Vehicle (UAV). Journal of Aerospace Engineering, 2016, 29, 04015015.	1.4	13
45	An explicit CFD model for the DBD plasma actuators using wall-jet similarity approach. Journal of Electrostatics, 2020, 107, 103497.	1.9	13
46	Implementation of Stair-Shaped Dielectric Layers in Micro- and Macroplasma Actuators for Increased Efficiency and Lifetime. Journal of Fluids Engineering, Transactions of the ASME, 2020, 142, .	1.5	13
47	Performance assessment limits in transonic 3D turbine stage blade rows using a mixing-plane approach. Journal of Mechanical Science and Technology, 2010, 24, 2035-2042.	1.5	12
48	Atomization and spray characteristics around an ERBS using various operational models and conditions: numerical investigation. International Journal of Heat and Mass Transfer, 2020, 161, 120243.	4.8	12
49	Numerical Investigation of Electrostatic Spray Painting Transfer Processes for Vehicle Coating. SAE International Journal of Advances and Current Practices in Mobility, 0, 2, 747-754.	2.0	12
50	Numerical simulation of the polymer electrolyte membrane fuel cells with intermediate blocked interdigitated flow fields. International Journal of Energy Research, 2022, 46, 15309-15331.	4.5	12
51	Acheon Project: A Novel Vectoring Jet Concept. , 2012, , .		11
52	Parametric Analysis of a Large-Scale Cycloidal Rotor in Hovering Conditions. Journal of Aerospace Engineering, 2017, 30, 04016066.	1.4	11
53	Low-power smart sensing in energy and water systems integration. , 2017, , .		11
54	A Review of Propulsion Systems for CubeSats. , 2018, , .		11

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55	Aerodynamic optimization of cyclorotors. Aircraft Engineering and Aerospace Technology, 2016, 88, 232-245.	0.8	10
56	Experimental Thermal Characterization of DBD Plasma Actuators. , 2017, , .		10
57	Thermoelectric and solar heat pump use toward self sufficient buildings: The case of a container house. Thermal Science and Engineering Progress, 2020, 18, 100509.	2.7	10
58	Performance improvement and start-up characteristics of a cyclorotor using multiple plasma actuators. Meccanica, 2021, 56, 2707-2730.	2.0	9
59	Analysis of Innovative Plasma Actuator Geometries for Boundary Layer Control. , 2016, , .		8
60	A new aircraft architecture based on the ACHEON Coanda effect nozzle: flight model and energy evaluation. European Transport Research Review, 2016, 8, .	4.8	8
61	Aeroelastic Analysis of a Cycloidal Rotor Under Various Operating Conditions. Journal of Aircraft, 2018, 55, 1675-1688.	2.4	8
62	Aerodynamic and Aeroelastic Analysis of a Cycloidal Rotor. , 2014, , .		7
63	Can constructal law and exergy analysis produce a robust design method that couples with industry 4.0 paradigms? The case of a container house. Mathematical Modelling of Engineering Problems, 2018, 5, 303-312.	0.5	7
64	Roto-Cycloid Propelled Airship Dimensioning and Energetic Equilibrium. , 2014, , .		6
65	Comparative Evaluation of Dielectric Materials for Plasma Actuators Active Flow Control and Heat Transfer Applications. , 2021, , .		6
66	Experimental Analysis of Alternative Dielectric Materials for DBD Plasma Actuators. , 2018, , .		6
67	High Altitude Transitional Flow Computation for a Propulsion System Nacelle of MAAT Airship. SAE International Journal of Aerospace, 0, 6, 714-720.	4.0	5
68	Turbulent transition modeling through mechanical considerations. Applied Mathematics and Computation, 2015, 269, 308-325.	2.2	5
69	A comparison of post-stall models extended for propeller performance prediction. Aircraft Engineering and Aerospace Technology, 2016, 88, 540-549.	0.8	5
70	Numerical Analysis of a Cycloidal Rotor under Diverse Operating Conditions and Altitudes. SAE International Journal of Advances and Current Practices in Mobility, 0, 2, 792-802.	2.0	5
71	CFD Analysis and Optimization of a Variable Shape Airship. , 2012, , .		4
72	Overcoming Stopovers in Cycloidal Rotor Propulsion Integration on Air Vehicles. , 2012, , .		4

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73	Full Range Airfoil Polars for Propeller Blade Element Momentum Analysis. , 2013, , .		4
74	Modeling of hypersonic flow on a MPD thruster geometry using a PISO based method. , 2013, , .		4
75	Thermojet: An Old Idea Can Define a Novel Family of Jets. , 0, , .		4
76	Plasma Actuators for Boundary Layer Control of Next Generation Nozzles. , 2015, , .		4
77	3D Effects in Cyclorotor Propulsion Systems. , 2015, , .		4
78	Constructal Design of an Entropic Wall With Circulating Water Inside. Journal of Heat Transfer, 2016, 138, .	2.1	4
79	Comments on "New insight into the definitions of the Bejan number". International Communications in Heat and Mass Transfer, 2021, 120, 104997.	5.6	4
80	A critical review on heat and mass transfer modelling of viral infection and virion evolution: The case of SARS-CoV2. Thermal Science, 2021, 25, 2831-2843.	1.1	4
81	Diffusive Bejan number and second law of thermodynamics toward a new dimensionless formulation of fluid dynamics laws. Thermal Science, 2019, 23, 4005-4022.	1.1	4
82	Improved performance of polyimide Cirlex-based dielectric barrier discharge plasma actuators for flow control. Polymers for Advanced Technologies, 2022, 33, 1278-1290.	3.2	4
83	Analytical Modeling of a Cyclorotor in Forward Flight. , 0, , .		3
84	Exit Flow Vector Control on a Coanda Nozzle Using Dielectric Barrier Discharge Actuator. , 2014, , .		3
85	A New Propelled Wing Aircraft Configuration. , 2016, , .		3
86	Influence of Exposed Electrode Thickness on Plasma Actuators Performance for Coupled Deicing and Flow Control Applications. , 2021, , .		3
87	Design of an Innovative Off Road Hybrid Vehicle by Energy Efficiency Criteria. International Journal of Heat and Technology, 2016, 34, S387-S395.	0.6	3
88	Sociotechnical design a review and future interdisciplinary perspectives involving thermodynamics in today societal contest. International Communications in Heat and Mass Transfer, 2021, 128, 105622.	5.6	3
89	Numerical Research on Efficiency Performance of the Propulsion System for an Innovative Airship. , 2012, , .		2
90	Wind Energy Production Using an Optimized Variable Pitch Vertical Axis Rotor. , 2014, , .		2

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91	Cycloidal Rotor Propulsion System With Plasma Enhanced Aerodynamics. , 2014, , .		2
92	Preliminary Implementation Study of ACHEON Thrust and Vector Electrical Propulsion on a STOL Light Utility Aircraft. , 2015, , .		2
93	A New VTOL Propelled Wing for Flying Cars: Critical Bibliographic Analysis. , 2017, , .		2
94	Study of a Water-Energy Integrated System: Challenges of Prototyping. , 2018, , .		2
95	Development of the Concept vs Prototyping: Implementation of a real scale Water-Energy Integrated System. , 2018, , .		2
96	Study of the Plasma Actuator Effect on the Flow Characteristics of an Airfoil: An LES Investigation. SAE International Journal of Advances and Current Practices in Mobility, 0, 3, 1206-1215.	2.0	2
97	Performance Optimization of Forward-Flight and Lift-Up Phases in a Cycloidal Rotor Using an Active Control Mechanism. Journal of Aerospace Engineering, 2021, 34, .	1.4	2
98	Active control assessments towards optimizing the performance of a cycloidal rotor at hover. Aerospace Science and Technology, 2021, 119, 107141.	4.8	2
99	Novel Propulsion System for VTOL Aircraft Based on Cycloidal Rotors Coupled With Wings. , 2020, , .		2
100	Simulation of the aerodynamic behaviour of a micro wind turbine. Renewable Energy and Power Quality Journal, 2009, 1, 396-400.	0.2	2
101	Numerical Modelling of Electrode Geometry Effects on a 2D Self-Field MPD Thruster. , 2013, , .		1
102	Analytic Model Able to Assist in Parametric Design of Cycloidal Rotor Thrusters. , 2013, , .		1
103	Numerical Modeling of Turbulent Transitional MHD Flow for Boundary Layer Control. , 2013, , .		1
104	Numerical Analysis of Design Parameters With Strong Influence on the Aerodynamic Efficiency of a Small-Scale Self-Pitch VAWT. , 2015, , .		1
105	MAAT Cruiser/Feeder Airship Design: Intrinsic Stability and Energetic Flight Model. , 2015, , .		1
106	Prevention and Risk Management in RTD European Projects Developed by University-Company's Consortiums. Procedia Computer Science, 2015, 64, 403-408.	2.0	1
107	Temperature Oscillations in the Wall of a Cooled Multi Pulsejet Propeller for Aeronautic Propulsion. , 0, , .		1
108	Numerical Analysis of a Multi-Species MHD Model for Plasma Layer Control of Re-Entry Vehicles. , 2018, , .		1

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109	Effects of Harmonic Vibration on Cycloidal Rotor Performance. , 2018, , .		1
110	Unsteady Interaction Effects Between an Airship and Its Air-Jet Propulsion System. Advanced Structured Materials, 2015, , 127-143.	0.5	1
111	Modeling Fluid dynamics and Aerodynamics by Second Law and Bejan Number (Part 1 - Theory). INCAS Bulletin, 2019, 11, 169-180.	0.6	1
112	A new dimensionless approach to general fluid dynamics problems that accounts both the first and the second law of thermodynamics. Mathematical Modelling of Engineering Problems, 2018, 5, 331-340.	0.5	1
113	Thermodynamic Analysis and Preliminary Design of the Cooling System of a Pulsejet for Aeronautic Propulsion. International Journal of Heat and Technology, 2016, 34, S528-S534.	0.6	1
114	Safety Analysis of an Airship Which Loses Lifting Gas from the Hull. , 0, , .		1
115	Hypersonic Flow Simulation towards Space Propulsion Geometries. , 0, , .		1
116	The influence of convective exchanges on Coandã effect. INCAS Bulletin, 2019, 11, 191-202.	0.6	1
117	Dielectric Barrier Discharge Plasma Actuators for Active Flow Control, Ice Formation Detection and Ice Accumulation Prevention. , 2020, , .		1
118	Turbine Blade Duty Re-Design by Controlling Lean and Sweep Using an Innovative Iterative Inverse Design Method. , 2006, , 1249.		0
119	Benchmark test cases for CFD in mechanical engineering. Open Engineering, 2011, 1, .	1.6	0
120	A Novel Look at the Performance of the Cyclorotor Propulsion System for Air Vehicles. , 2012, , .		0
121	Energy Self Sufficient Aircrafts Can Become Reality through New Propulsion Design Approaches. , 2015, , .		0
122	Multifunctional Unmanned Reconnaissance Aircraft for Low-Speed and STOL Operations. , 0, , .		0
123	Optimized Modular Design for Energy Efficiency: The Case of an Innovative Electric Hybrid Vehicle Design. , 2016, , .		0
124	Control, Propulsion and Energy Assessment of a Spherical UAS for Low Speed Operations. , 0, , .		0
125	Analysis and Comparison of Different Chemistry Models for the Computation of Reacting Flows on Re-entry and Hypersonic Vehicles. , 2019, , .		0
126	Numerical Simulation of the Electrostatic Coating Process: the Effect of Applied Voltage, Droplet Charge and Size on the Coating Efficiency. SAE International Journal of Advances and Current Practices in Mobility, 0, 3, 1223-1230.	2.0	0

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127	Analysis and Implementation of Dielectric Barrier Discharge Plasma Actuators for Ground Vehicles Wake Reduction. , 2021, , .		0
128	Coupled Active Control Technique for Oscillating Blades in a Cycloidal Rotor Using CFD and ANN Analysis by Including 3D End Wall Effects. Journal of Aerospace Engineering, 2021, 34, 04021089.	1.4	0
129	Redesigning Annular Turbine Blade Rows Using a Viscous-Inviscid Inverse Design Method. , 2008, , .		0
130	Disc Turbine for Energy Harvesting. , 2018, , .		0
131	Flow Modelling of Propulsion Nozzles for Nano-Satellites. , 2019, , .		0
132	CFD Analysis of Flow Structures in a Mixing Chamber. , 2019, , .		0
133	Plasma Actuators Optimization Using Stair Shaped Dielectric Layers. , 2019, , .		0
134	Accounting Thermal Exchanges in Coanda Effect. , 0, , .		0
135	Numerical Analysis on the Stability Conditions of an Electrohydrodynamic Jet. , 2020, , .		0