

Ernesto Benini

List of Publications by Year in descending order

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123
papers

2,609
citations

236612

25
h-index

214527

47
g-index

126
all docs

126
docs citations

126
times ranked

1626
citing authors

#	ARTICLE	IF	CITATIONS
1	The Darrieus wind turbine: Proposal for a new performance prediction model based on CFD. <i>Energy</i> , 2011, 36, 4919-4934.	4.5	396
2	Genetic Diversity as an Objective in Multi-Objective Evolutionary Algorithms. <i>Evolutionary Computation</i> , 2003, 11, 151-167.	2.3	189
3	Three-Dimensional Multi-Objective Design Optimization of a Transonic Compressor Rotor. <i>Journal of Propulsion and Power</i> , 2004, 20, 559-565.	1.3	148
4	Optimal Design of Horizontal-Axis Wind Turbines Using Blade-Element Theory and Evolutionary Computation. <i>Journal of Solar Energy Engineering, Transactions of the ASME</i> , 2002, 124, 357-363.	1.1	127
5	Thermal and electrical performance of an integrated PV-PCM system in double skin façades: A numerical study. <i>Solar Energy</i> , 2016, 136, 112-124.	2.9	106
6	Aerodynamics of swept and leaned transonic compressor-rotors. <i>Applied Energy</i> , 2007, 84, 1012-1027.	5.1	80
7	Performance-optimized airfoil for Darrieus wind turbines. <i>Renewable Energy</i> , 2016, 94, 328-340.	4.3	73
8	Optimization of a Darrieus vertical-axis wind turbine using blade element " momentum theory and evolutionary algorithm. <i>Renewable Energy</i> , 2013, 59, 184-192.	4.3	68
9	Recent advances in transonic axial compressor aerodynamics. <i>Progress in Aerospace Sciences</i> , 2013, 56, 1-18.	6.3	59
10	Numerical evaluation of aerodynamic and inertial contributions to Darrieus wind turbine blade deformation. <i>Renewable Energy</i> , 2013, 51, 101-112.	4.3	58
11	Reduction of NO emissions in a turbojet combustor by direct water/steam injection: Numerical and experimental assessment. <i>Applied Thermal Engineering</i> , 2009, 29, 3506-3510.	3.0	46
12	Kriging-assisted design optimization of S-shape supersonic compressor cascades. <i>Aerospace Science and Technology</i> , 2016, 58, 275-297.	2.5	40
13	Efficiency enhancement in transonic compressor rotor blades using synthetic jets: A numerical investigation. <i>Applied Energy</i> , 2011, 88, 953-962.	5.1	39
14	Design, manufacturing and operation of a small turbojet-engine for research purposes. <i>Applied Energy</i> , 2007, 84, 1102-1116.	5.1	38
15	Effect of Blade Inclination Angle on a Darrieus Wind Turbine. <i>Journal of Turbomachinery</i> , 2012, 134, .	0.9	38
16	A sharp-interface immersed boundary method for moving objects in compressible viscous flows. <i>Computers and Fluids</i> , 2020, 201, 104415.	1.3	38
17	A review of installation effects of ultra-high bypass ratio engines. <i>Progress in Aerospace Sciences</i> , 2020, 119, 100680.	6.3	37
18	Significance of blade element theory in performance prediction of marine propellers. <i>Ocean Engineering</i> , 2004, 31, 957-974.	1.9	36

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19	Computational assessment of the DeepWind aerodynamic performance with different blade and airfoil configurations. Applied Energy, 2017, 185, 1100-1108.	5.1	36
20	Modeling Strategy and Numerical Validation for a Darrieus Vertical Axis Micro-Wind Turbine. , 2010, , .		34
21	Shock/Boundary-Layer/Tip-Clearance Interaction in a Transonic Rotor Blade. Journal of Propulsion and Power, 2009, 25, 668-677.	1.3	30
22	Proposal for a coupled aerodynamicâ€“structural wind turbine blade optimization. Composite Structures, 2017, 159, 144-156.	3.1	30
23	Development of High-Performance Airfoils for Axial Flow Compressors Using Evolutionary Computation. Journal of Propulsion and Power, 2002, 18, 544-554.	1.3	29
24	A Simplex Crossover based evolutionary algorithm including the genetic diversity as objective. Applied Soft Computing Journal, 2013, 13, 2104-2123.	4.1	29
25	High-Lift Multi-Element Airfoil Shape and Setting Optimization Using Multi-Objective Evolutionary Algorithms. Journal of Aircraft, 2011, 48, 683-696.	1.7	28
26	Proposal for an innovative chord distribution in the Troposkien vertical axis wind turbine concept. Energy, 2014, 66, 689-698.	4.5	28
27	Multi-objective structural optimization of a HAWT composite blade. Composite Structures, 2013, 106, 362-373.	3.1	27
28	Evaluation of the different aerodynamic databases for vertical axis wind turbine simulations. Renewable and Sustainable Energy Reviews, 2014, 40, 386-399.	8.2	26
29	Modeling of near wake characteristics in floating offshore wind turbines using an actuator line method. Renewable Energy, 2022, 185, 871-887.	4.3	26
30	A computational assessment of the aerodynamic performance of a tilted Darrieus wind turbine. Journal of Wind Engineering and Industrial Aerodynamics, 2015, 145, 263-269.	1.7	24
31	Preliminary Study on a Wide-Speed-Range Helicopter Rotor/Turboshaft System. Journal of Aircraft, 2012, 49, 1032-1038.	1.7	22
32	Boundary Layer Ingestion Propulsion: A Review on Numerical Modeling. Journal of Engineering for Gas Turbines and Power, 2020, 142, .	0.5	22
33	Surrogate-Based Shape Optimization of Stall Margin and Efficiency of a Centrifugal Compressor. Journal of Propulsion and Power, 2015, 31, 1607-1620.	1.3	21
34	Aerodynamic shape optimization of aircraft components using an advanced multi-objective evolutionary approach. Computer Methods in Applied Mechanics and Engineering, 2015, 285, 255-290.	3.4	21
35	A Kriging-assisted multiobjective evolutionary algorithm. Applied Soft Computing Journal, 2017, 58, 155-175.	4.1	20
36	Multi-Objective Optimization of Helicopter Airfoils Using Surrogate-Assisted Memetic Algorithms. Journal of Aircraft, 2012, 49, 375-383.	1.7	19

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37	Time-Accurate Experimental Investigation of Hypersonic Inlet Buzz at Mach 5. <i>AIAA Journal</i> , 2020, 58, 2197-2205.	1.5	19
38	Numerical Investigation of Laminar to Turbulent Boundary Layer Transition on a Naca 0012 Airfoil for Vertical-Axis Wind Turbine Applications. <i>Wind Engineering</i> , 2011, 35, 661-685.	1.1	17
39	Computational Design Optimization for S-Ducts. <i>Designs</i> , 2018, 2, 36.	1.3	17
40	A Methodology for Determining the Optimal Rotational Speed of a Variable RPM Main Rotor/Turboshaft Engine System. <i>Journal of the American Helicopter Society</i> , 2015, 60, 1-11.	0.5	16
41	Innovative Discrete-Vortex Model for Dynamic Stall Simulations. <i>AIAA Journal</i> , 2015, 53, 479-485.	1.5	16
42	PV-PCM integration in glazed building. Co-simulation and genetic optimization study. <i>Building and Environment</i> , 2017, 126, 161-175.	3.0	16
43	Unified wall-resolved and wall-modeled method for large-eddy simulations of compressible wall-bounded flows. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	16
44	Maximisation of installed net resulting force through multi-level optimisation of an ultra-high bypass ratio engine nacelle. <i>Aerospace Science and Technology</i> , 2021, 119, 107169.	2.5	16
45	Optimal spanwise chord and thickness distribution for a Troposkien Darrieus wind turbine. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2014, 125, 13-21.	1.7	15
46	Aerodynamic Optimization of a Morphing Leading Edge Airfoil with a Constant Arc Length Parameterization. <i>Journal of Aerospace Engineering</i> , 2018, 31, .	0.8	15
47	Design optimization of vaned diffusers for centrifugal compressors using genetic algorithms. , 2001, , .		14
48	Large-Eddy Simulations of the Unsteady Behavior of a Hypersonic Intake at Mach 5. <i>AIAA Journal</i> , 2021, 59, 3859-3872.	1.5	14
49	Performance of a Turboshaft Engine for Helicopter Applications Operating at Variable Shaft Speed. , 2012, , .		13
50	Variable-Speed Rotor Helicopters: Performance Comparison Between Continuously Variable and Fixed-Ratio Transmissions. <i>Journal of Aircraft</i> , 2016, 53, 1189-1200.	1.7	13
51	High-order conservative formulation of viscous terms for variable viscosity flows. <i>Acta Mechanica</i> , 2021, 232, 2115-2133.	1.1	13
52	Optimal Navier–Stokes Design of Compressor Impellers Using Evolutionary Computation. <i>International Journal of Computational Fluid Dynamics</i> , 2003, 17, 357-369.	0.5	12
53	Experimental and numerical analyses to enhance the performance of a microturbine diffuser. <i>Experimental Thermal and Fluid Science</i> , 2006, 30, 427-440.	1.5	12
54	Aerodynamic Benchmarking of the Deepwind Design. <i>Energy Procedia</i> , 2015, 75, 677-682.	1.8	12

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55	A surrogate-assisted evolutionary algorithm based on the genetic diversity objective. Applied Soft Computing Journal, 2015, 36, 87-100.	4.1	12
56	Aerodynamic Shape Optimization in Aeronautics: A Fast and Effective Multi-Objective Approach. Archives of Computational Methods in Engineering, 2014, 21, 189-271.	6.0	11
57	Numerical Study on the Internal Flow Field of a Reversible Turbine during Continuous Guide Vane Closing. Energies, 2017, 10, 988.	1.6	11
58	Accurate 2-D Modelling of Transonic Compressor Cascade Aerodynamics. Aerospace, 2019, 6, 57.	1.1	11
59	Multi-Objective RANS Aerodynamic Optimization of a Hypersonic Intake Ramp at Mach 5. Energies, 2022, 15, 2811.	1.6	11
60	Turbojet Engine Performance Tuning With a New Map Adaptation Concept. Journal of Engineering for Gas Turbines and Power, 2014, 136, .	0.5	10
61	The role of radial secondary flow in the process of rotating stall for a 1.5-stage axial compressor. Aerospace Science and Technology, 2021, 115, 106752.	2.5	10
62	Study of geometric parameters for the design of short intakes with fan modelling. Chinese Journal of Aeronautics, 2022, 35, 18-32.	2.8	10
63	Comparison of Optimization Strategies for High-Lift Design. Journal of Aircraft, 2017, 54, 642-658.	1.7	9
64	Shape Optimization of a Curved Duct with Free Form Deformations. , 2017, , .		9
65	Analysis of installation aerodynamics and comparison of optimised configuration of an ultra-high bypass ratio turbofan nacelle. Aerospace Science and Technology, 2022, 128, 107756.	2.5	9
66	Nonparametric Fitting of Aerodynamic Data Using Smoothing Thin-Plate Splines. AIAA Journal, 2010, 48, 1403-1419.	1.5	8
67	Computational design of S-Duct intakes for distributed propulsion. Aircraft Engineering and Aerospace Technology, 2014, 86, 473-477.	0.8	7
68	Comparison of Constrained Parameterisation Strategies for Aerodynamic Optimisation of Morphing Leading Edge Airfoil. Aerospace, 2019, 6, 31.	1.1	7
69	Aerodynamic Behaviour of a Novel Three-Dimensional Shaped Transonic Compressor Rotor Blade. , 2008, , .		6
70	Numerical Assessment of Pneumatic Devices on the Wing/Fuselage Junction of a Tiltrotor. Journal of Aircraft, 2013, 50, 752-763.	1.7	6
71	Two-Objective Optimization of a Kaplan Turbine Draft Tube Using a Response Surface Methodology. Energies, 2020, 13, 4899.	1.6	6
72	Large-Eddy-Simulations of the unsteady behaviour of a Mach 5 hypersonic intake. , 2021, , .		6

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73	A Simplex-Crossover-Based Multi-Objective Evolutionary Algorithm. Lecture Notes in Electrical Engineering, 2014, , 583-598.	0.3	6
74	Improvements in Off Design Aeroengine Performance Prediction Using Analytic Compressor Map Interpolation. International Journal of Turbo and Jet Engines, 2012, 29, .	0.3	5
75	Turbofan multiobjectiveâ€multipoint optimization for UAV/UCAV applications. Aircraft Engineering and Aerospace Technology, 2013, 85, 366-381.	0.8	5
76	Supersonic Compressor Cascade Shape Optimization under Multiple Inlet Mach Operating Conditions. Aerospace, 2019, 6, 64.	1.1	5
77	Ultra-high bypass nacelle geometry design space exploration. , 2021, , .		5
78	Aeroâ€structural design optimization of vertical axis wind turbines. Wind Energy, 2017, 20, 491-505.	1.9	4
79	Numerical Study of a Horizontal Wind Turbine under Yaw Conditions. Mathematical Problems in Engineering, 2021, 2021, 1-17.	0.6	4
80	A Review of Computational Methods and Reduced Order Models for Flutter Prediction in Turbomachinery. Aerospace, 2021, 8, 242.	1.1	4
81	Validation of a Navier-Stokes Solver for CFD Computations of Transonic Compressors. , 2006, , 507.		3
82	Effect of Forward and Aft Lean on the Performance of a Transonic Compressor Rotor. International Journal of Turbo and Jet Engines, 2008, 25, .	0.3	3
83	GeDEA-II. , 2012, , .		3
84	Design-Assisted of Pitching Aerofoils through Enhanced Identification of Coherent Flow Structures. Designs, 2021, 5, 11.	1.3	3
85	Sensitivity analysis of nacelle intake high-incidence aerodynamics including a body force fan model. , 2021, , .		3
86	Axial Flow Compressor Stability Enhancement: Circumferential T-Shape Grooves Performance Investigation. Aerospace, 2021, 8, 12.	1.1	3
87	Three-Dimensional Multi-Objective Design Optimization of a Transonic Compressor Rotor. , 2003, , .		2
88	Development of a Multiobjective Optimization Method for Aerospace Turbopump Design. International Journal of Turbo and Jet Engines, 2010, 27, .	0.3	2
89	Airfoil Data Fitting Using Multivariate Smoothing Thin Plate Splines. AIAA Journal, 2011, 49, 349-364.	1.5	2
90	State-of-Art of Transonic Axial Compressors. , 2011, , .		2

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91	Evaluation of the wind potential in the province of Belluno (Italy). , 2012, , .		2
92	Electric Circuit Model for the Aerodynamic Performance Analysis of a Three-Blade Darrieus-Type Vertical Axis Wind Turbine: The Tchakoua Model. Energies, 2016, 9, 820.	1.6	2
93	Investigation of HL-CRM Aerodynamics With a UHBPR Nacelle in Powered-on Condition. , 2021, , .		2
94	Experimental Investigation on the Convection Heat Transfer Enhancement for Heated Cylinder Using Pulsated Flow. Thermal Science and Engineering Progress, 2021, 26, 101055.	1.3	2
95	Hypersonic intake design using a CFD data-driven multi-objective optimisation strategy. , 2021, , .		2
96	Assessment of engine modelling on the installed aerodynamics of an ultra-high bypass turbofan. , 2022, , .		2
97	A straightforward strategy to unify WR/WMLES approaches for compressible wall-bounded flows. , 2022, , .		2
98	RANS Analysis of HL-CRM at Take-off and Landing Configurations with different Flap Deflections and Engine Settings using DLR-TAU Code. , 2022, , .		2
99	Comparison of nacelle models for the evaluation of an ultra-high bypass engine aerodynamics. , 2022, , .		2
100	Critical endwall blockage attenuation-based automatic optimization of casing treatment design for transonic axial flow compressor. Aerospace Science and Technology, 2022, 126, 107592.	2.5	2
101	Assessment of Loss Correlations for Performance Prediction of Low Reaction Gas Turbine Stages. , 2008, , .		1
102	Fast-Accurate Model for Performance Prediction of Multistage Impulse Turbine Stages. , 2008, , .		1
103	Efficiency and Stall Margin Enhancement in Transonic Compressor Rotors Using Synthetic Jets: A Numerical Investigation. , 2009, , .		1
104	Aerodynamic Optimization of an Impulse Turbine Cascade Including Laminar/Turbulent Transition Prediction. , 2010, , .		1
105	Numerical Simulation of a Straight-Bladed Vertical-Axis Water Turbine Operating in a 2 m/s Current. Applied Mechanics and Materials, 0, 325-326, 162-166.	0.2	1
106	Helicopter fuselage aerodynamic data fitting using multivariate smoothing thin plate splines. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2014, 228, 384-397.	0.7	1
107	Extensive Validation of HAWT Unsteady Modelling Using BEM and CFD. , 2020, , .		1
108	Numerical Simulation of Harmonic Pitching Supercritical Airfoils Equipped with Movable Gurney Flaps. International Review of Aerospace Engineering, 2019, 12, 109.	0.2	1

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109	Installed performance of ultra-high bypass turbofans: estimation of power saving in optimised configurations at steady flight. , 2022, , .		1
110	Design of short intakes for ultra-high bypass engines: preliminary exploration at fixed incidence. , 2022, , .		1
111	Optimum Operating Parameters and Blade Setting of a High-Speed Propeller. Journal of Aircraft, 2022, 59, 484-501.	1.7	1
112	Performance Prediction of Subsonic Vaned Diffusers Using an Integral Boundary Layer Method. International Journal of Turbo and Jet Engines, 2007, 24, .	0.3	0
113	Turbo-Pump Pressurization Concept for Hybrid Propulsion Thrusters Application to Launch Vehicles. , 2008, , .		0
114	Efficient Aerodynamic Optimization of an Impulse Turbine Rotor Cascade. , 2009, , .		0
115	Development of a Medium-Size Steam Reformer for CHP Applications Based on PEM Fuel Cells. , 2010, , .		0
116	Numerical performance and stress prediction for a vertical-axis wind turbine as a function of the aerodynamic control strategy. , 2012, , .		0
117	Optimization with Surrogate Models: Flow and Heat Transfer Applications. Mathematical Problems in Engineering, 2019, 2019, 1-2.	0.6	0
118	Multi-Criteria Multi-Constrained Aerodynamic Optimization of Civil Tiltrotor Empennage Surfaces. , 2021, , .		0
119	Computational Evaluation of Turbo and Electric Powered Simulators for Wind Tunnel Tests of Ultra-High Bypass Engines. , 2021, , .		0
120	Axial Rotor Design under Clean and Distortion Conditions using Mean-Line and CFD Methods. , 2021, , .		0
121	Wall-modelled and wall-resolved Large-Eddy Simulations of shock-wave/boundary layer interaction. , 2022, , .		0
122	Design of a Rear BLI Non-Axisymmetric Propulsor for a Transonic Flight Experiment. , 2022, , .		0
123	Robust Design Optimisation of S-ducts. , 2022, , .		0