

Ernesto Benini

List of Publications by Year in descending order

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Version: 2024-02-01

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	Wall-modelled and wall-resolved Large-Eddy Simulations of shock-wave/boundary layer interaction. , 2022, , .		0
2	Modeling of near wake characteristics in floating offshore wind turbines using an actuator line method. Renewable Energy, 2022, 185, 871-887.	4.3	26
3	Assessment of engine modelling on the installed aerodynamics of an ultra-high bypass turbofan. , 2022, , .		2
4	Installed performance of ultra-high bypass turbofans: estimation of power saving in optimised configurations at steady flight. , 2022, , .		1
5	Design of short intakes for ultra-high bypass engines: preliminary exploration at fixed incidence. , 2022, , .		1
6	A straightforward strategy to unify WR/WMLES approaches for compressible wall-bounded flows. , 2022, , .		2
7	RANS Analysis of HL-CRM at Take-off and Landing Configurations with different Flap Deflections and Engine Settings using DLR-TAU Code. , 2022, , .		2
8	Comparison of nacelle models for the evaluation of an ultra-high bypass engine aerodynamics. , 2022, , .		2
9	Study of geometric parameters for the design of short intakes with fan modelling. Chinese Journal of Aeronautics, 2022, 35, 18-32.	2.8	10
10	Optimum Operating Parameters and Blade Setting of a High-Speed Propeller. Journal of Aircraft, 2022, 59, 484-501.	1.7	1
11	Multi-Objective RANS Aerodynamic Optimization of a Hypersonic Intake Ramp at Mach 5. Energies, 2022, 15, 2811.	1.6	11
12	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
13	Design of a Rear BLI Non-Axisymmetric Propulsor for a Transonic Flight Experiment. , 2022, , .		0
14	Robust Design Optimisation of S-ducts. , 2022, , .		0
15	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
16	Ultra-high bypass nacelle geometry design space exploration. , 2021, , .		5
17	Design-Assisted of Pitching Aerofoils through Enhanced Identification of Coherent Flow Structures. Designs, 2021, 5, 11.	1.3	3
18	High-order conservative formulation of viscous terms for variable viscosity flows. Acta Mechanica, 2021, 232, 2115-2133.	1.1	13

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19	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
20	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
21	Multi-Criteria Multi-Constrained Aerodynamic Optimization of Civil Tiltrotor Empennage Surfaces. , 2021, , .		0
22	Computational Evaluation of Turbo and Electric Powered Simulators for Wind Tunnel Tests of Ultra-High Bypass Engines. , 2021, , .		0
23	Investigation of HL-CRM Aerodynamics With a UHBPR Nacelle in Powered-on Condition. , 2021, , .		2
24	The role of radial secondary flow in the process of rotating stall for a 1.5-stage axial compressor. <i>Aerospace Science and Technology</i> , 2021, 115, 106752.	2.5	10
25	Numerical Study of a Horizontal Wind Turbine under Yaw Conditions. <i>Mathematical Problems in Engineering</i> , 2021, 2021, 1-17.	0.6	4
26	A Review of Computational Methods and Reduced Order Models for Flutter Prediction in Turbomachinery. <i>Aerospace</i> , 2021, 8, 242.	1.1	4
27	Experimental Investigation on the Convection Heat Transfer Enhancement for Heated Cylinder Using Pulsated Flow. <i>Thermal Science and Engineering Progress</i> , 2021, 26, 101055.	1.3	2
28	Large-Eddy-Simulations of the unsteady behaviour of a Mach 5 hypersonic intake. , 2021, , .		6
29	Sensitivity analysis of nacelle intake high-incidence aerodynamics including a body force fan model. , 2021, , .		3
30	Axial Rotor Design under Clean and Distortion Conditions using Mean-Line and CFD Methods. , 2021, , .		0
31	Axial Flow Compressor Stability Enhancement: Circumferential T-Shape Grooves Performance Investigation. <i>Aerospace</i> , 2021, 8, 12.	1.1	3
32	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
33	Hypersonic intake design using a CFD data-driven multi-objective optimisation strategy. , 2021, , .		2
34	A review of installation effects of ultra-high bypass ratio engines. <i>Progress in Aerospace Sciences</i> , 2020, 119, 100680.	6.3	37
35	Two-Objective Optimization of a Kaplan Turbine Draft Tube Using a Response Surface Methodology. <i>Energies</i> , 2020, 13, 4899.	1.6	6
36	A sharp-interface immersed boundary method for moving objects in compressible viscous flows. <i>Computers and Fluids</i> , 2020, 201, 104415.	1.3	38

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37	Time-Accurate Experimental Investigation of Hypersonic Inlet Buzz at Mach 5. AIAA Journal, 2020, 58, 2197-2205.	1.5	19
38	Boundary Layer Ingestion Propulsion: A Review on Numerical Modeling. Journal of Engineering for Gas Turbines and Power, 2020, 142, .	0.5	22
39	Extensive Validation of HAWT Unsteady Modelling Using BEM and CFD. , 2020, , .		1
40	Accurate 2-D Modelling of Transonic Compressor Cascade Aerodynamics. Aerospace, 2019, 6, 57.	1.1	11
41	Supersonic Compressor Cascade Shape Optimization under Multiple Inlet Mach Operating Conditions. Aerospace, 2019, 6, 64.	1.1	5
42	Comparison of Constrained Parameterisation Strategies for Aerodynamic Optimisation of Morphing Leading Edge Airfoil. Aerospace, 2019, 6, 31.	1.1	7
43	Optimization with Surrogate Models: Flow and Heat Transfer Applications. Mathematical Problems in Engineering, 2019, 2019, 1-2.	0.6	0
44	Numerical Simulation of Harmonic Pitching Supercritical Airfoils Equipped with Movable Gurney Flaps. International Review of Aerospace Engineering, 2019, 12, 109.	0.2	1
45	Aerodynamic Optimization of a Morphing Leading Edge Airfoil with a Constant Arc Length Parameterization. Journal of Aerospace Engineering, 2018, 31, .	0.8	15
46	Computational Design Optimization for S-Ducts. Designs, 2018, 2, 36.	1.3	17
47	Computational assessment of the DeepWind aerodynamic performance with different blade and airfoil configurations. Applied Energy, 2017, 185, 1100-1108.	5.1	36
48	Comparison of Optimization Strategies for High-Lift Design. Journal of Aircraft, 2017, 54, 642-658.	1.7	9
49	A Kriging-assisted multiobjective evolutionary algorithm. Applied Soft Computing Journal, 2017, 58, 155-175.	4.1	20
50	Shape Optimization of a Curved Duct with Free Form Deformations. , 2017, , .		9
51	PV-PCM integration in glazed building. Co-simulation and genetic optimization study. Building and Environment, 2017, 126, 161-175.	3.0	16
52	Aero-structural design optimization of vertical axis wind turbines. Wind Energy, 2017, 20, 491-505.	1.9	4
53	Proposal for a coupled aerodynamic-structural wind turbine blade optimization. Composite Structures, 2017, 159, 144-156.	3.1	30
54	Numerical Study on the Internal Flow Field of a Reversible Turbine during Continuous Guide Vane Closing. Energies, 2017, 10, 988.	1.6	11

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55	Electric Circuit Model for the Aerodynamic Performance Analysis of a Three-Blade Darrieus-Type Vertical Axis Wind Turbine: The Tchakoua Model. <i>Energies</i> , 2016, 9, 820.	1.6	2
56	Performance-optimized airfoil for Darrieus wind turbines. <i>Renewable Energy</i> , 2016, 94, 328-340.	4.3	73
57	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
58	Kriging-assisted design optimization of S-shape supersonic compressor cascades. <i>Aerospace Science and Technology</i> , 2016, 58, 275-297.	2.5	40
59	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
60	Aerodynamic Benchmarking of the Deepwind Design. <i>Energy Procedia</i> , 2015, 75, 677-682.	1.8	12
61	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
62	A computational assessment of the aerodynamic performance of a tilted Darrieus wind turbine. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2015, 145, 263-269.	1.7	24
63	A surrogate-assisted evolutionary algorithm based on the genetic diversity objective. <i>Applied Soft Computing Journal</i> , 2015, 36, 87-100.	4.1	12
64	Surrogate-Based Shape Optimization of Stall Margin and Efficiency of a Centrifugal Compressor. <i>Journal of Propulsion and Power</i> , 2015, 31, 1607-1620.	1.3	21
65	Innovative Discrete-Vortex Model for Dynamic Stall Simulations. <i>AIAA Journal</i> , 2015, 53, 479-485.	1.5	16
66	Aerodynamic shape optimization of aircraft components using an advanced multi-objective evolutionary approach. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2015, 285, 255-290.	3.4	21
67	Helicopter fuselage aerodynamic data fitting using multivariate smoothing thin plate splines. <i>Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering</i> , 2014, 228, 384-397.	0.7	1
68	Computational design of S-Duct intakes for distributed propulsion. <i>Aircraft Engineering and Aerospace Technology</i> , 2014, 86, 473-477.	0.8	7
69	Turbojet Engine Performance Tuning With a New Map Adaptation Concept. <i>Journal of Engineering for Gas Turbines and Power</i> , 2014, 136, .	0.5	10
70	Proposal for an innovative chord distribution in the Troposkien vertical axis wind turbine concept. <i>Energy</i> , 2014, 66, 689-698.	4.5	28
71	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
72	Aerodynamic Shape Optimization in Aeronautics: A Fast and Effective Multi-Objective Approach. <i>Archives of Computational Methods in Engineering</i> , 2014, 21, 189-271.	6.0	11

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73	Evaluation of the different aerodynamic databases for vertical axis wind turbine simulations. <i>Renewable and Sustainable Energy Reviews</i> , 2014, 40, 386-399.	8.2	26
74	A Simplex-Crossover-Based Multi-Objective Evolutionary Algorithm. <i>Lecture Notes in Electrical Engineering</i> , 2014, , 583-598.	0.3	6
75	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
76	Turbofan multiobjective"multipoint optimization for UAV/UCAV applications. <i>Aircraft Engineering and Aerospace Technology</i> , 2013, 85, 366-381.	0.8	5
77	Numerical evaluation of aerodynamic and inertial contributions to Darrieus wind turbine blade deformation. <i>Renewable Energy</i> , 2013, 51, 101-112.	4.3	58
78	A Simplex Crossover based evolutionary algorithm including the genetic diversity as objective. <i>Applied Soft Computing Journal</i> , 2013, 13, 2104-2123.	4.1	29
79	Recent advances in transonic axial compressor aerodynamics. <i>Progress in Aerospace Sciences</i> , 2013, 56, 1-18.	6.3	59
80	Multi-objective structural optimization of a HAWT composite blade. <i>Composite Structures</i> , 2013, 106, 362-373.	3.1	27
81	Numerical Assessment of Pneumatic Devices on the Wing/Fuselage Junction of a Tiltrotor. <i>Journal of Aircraft</i> , 2013, 50, 752-763.	1.7	6
82	Numerical performance and stress prediction for a vertical-axis wind turbine as a function of the aerodynamic control strategy. , 2012, , .		0
83	Preliminary Study on a Wide-Speed-Range Helicopter Rotor/Turboshaft System. <i>Journal of Aircraft</i> , 2012, 49, 1032-1038.	1.7	22
84	Multi-Objective Optimization of Helicopter Airfoils Using Surrogate-Assisted Memetic Algorithms. <i>Journal of Aircraft</i> , 2012, 49, 375-383.	1.7	19
85	Performance of a Turboshaft Engine for Helicopter Applications Operating at Variable Shaft Speed. , 2012, , .		13
86	Evaluation of the wind potential in the province of Belluno (Italy). , 2012, , .		2
87	Improvements in Off Design Aeroengine Performance Prediction Using Analytic Compressor Map Interpolation. <i>International Journal of Turbo and Jet Engines</i> , 2012, 29, .	0.3	5
88	GeDEA-II. , 2012, , .		3
89	Effect of Blade Inclination Angle on a Darrieus Wind Turbine. <i>Journal of Turbomachinery</i> , 2012, 134, .	0.9	38
90	Airfoil Data Fitting Using Multivariate Smoothing Thin Plate Splines. <i>AIAA Journal</i> , 2011, 49, 349-364.	1.5	2

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91	State-of-Art of Transonic Axial Compressors. , 2011, , .		2
92	Numerical Investigation of Laminar to Turbulent Boundary Layer Transition on a Naca 0012 Airfoil for Vertical-Axis Wind Turbine Applications. Wind Engineering, 2011, 35, 661-685.	1.1	17
93	The Darrieus wind turbine: Proposal for a new performance prediction model based on CFD. Energy, 2011, 36, 4919-4934.	4.5	396
94	Efficiency enhancement in transonic compressor rotor blades using synthetic jets: A numerical investigation. Applied Energy, 2011, 88, 953-962.	5.1	39
95	High-Lift Multi-Element Airfoil Shape and Setting Optimization Using Multi-Objective Evolutionary Algorithms. Journal of Aircraft, 2011, 48, 683-696.	1.7	28
96	Development of a Medium-Size Steam Reformer for CHP Applications Based on PEM Fuel Cells. , 2010, , .		0
97	Aerodynamic Optimization of an Impulse Turbine Cascade Including Laminar/Turbulent Transition Prediction. , 2010, , .		1
98	Modeling Strategy and Numerical Validation for a Darrieus Vertical Axis Micro-Wind Turbine. , 2010, , .		34
99	Development of a Multiobjective Optimization Method for Aerospace Turbopump Design. International Journal of Turbo and Jet Engines, 2010, 27, .	0.3	2
100	Nonparametric Fitting of Aerodynamic Data Using Smoothing Thin-Plate Splines. AIAA Journal, 2010, 48, 1403-1419.	1.5	8
101	Efficiency and Stall Margin Enhancement in Transonic Compressor Rotors Using Synthetic Jets: A Numerical Investigation. , 2009, , .		1
102	Reduction of NO emissions in a turbojet combustor by direct water/steam injection: Numerical and experimental assessment. Applied Thermal Engineering, 2009, 29, 3506-3510.	3.0	46
103	Shock/Boundary-Layer/Tip-Clearance Interaction in a Transonic Rotor Blade. Journal of Propulsion and Power, 2009, 25, 668-677.	1.3	30
104	Efficient Aerodynamic Optimization of an Impulse Turbine Rotor Cascade. , 2009, , .		0
105	Turbo-Pump Pressurization Concept for Hybrid Propulsion Thrusters Application to Launch Vehicles. , 2008, , .		0
106	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
107	Aerodynamic Behaviour of a Novel Three-Dimensional Shaped Transonic Compressor Rotor Blade. , 2008, , .		6
108	Assessment of Loss Correlations for Performance Prediction of Low Reaction Gas Turbine Stages. , 2008, , .		1

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109	Fast-Accurate Model for Performance Prediction of Multistage Impulse Turbine Stages. , 2008, , .		1
110	Performance Prediction of Subsonic Vaned Diffusers Using an Integral Boundary Layer Method. International Journal of Turbo and Jet Engines, 2007, 24, .	0.3	0
111	Aerodynamics of swept and leaned transonic compressor-rotors. Applied Energy, 2007, 84, 1012-1027.	5.1	80
112	Design, manufacturing and operation of a small turbojet-engine for research purposes. Applied Energy, 2007, 84, 1102-1116.	5.1	38
113	Validation of a Navier-Stokes Solver for CFD Computations of Transonic Compressors. , 2006, , 507.		3
114	Experimental and numerical analyses to enhance the performance of a microturbine diffuser. Experimental Thermal and Fluid Science, 2006, 30, 427-440.	1.5	12
115	Three-Dimensional Multi-Objective Design Optimization of a Transonic Compressor Rotor. Journal of Propulsion and Power, 2004, 20, 559-565.	1.3	148
116	Significance of blade element theory in performance prediction of marine propellers. Ocean Engineering, 2004, 31, 957-974.	1.9	36
117	Three-Dimensional Multi-Objective Design Optimization of a Transonic Compressor Rotor. , 2003, , .		2
118	Genetic Diversity as an Objective in Multi-Objective Evolutionary Algorithms. Evolutionary Computation, 2003, 11, 151-167.	2.3	189
119	Optimal Navier-Stokes Design of Compressor Impellers Using Evolutionary Computation. International Journal of Computational Fluid Dynamics, 2003, 17, 357-369.	0.5	12
120	Development of High-Performance Airfoils for Axial Flow Compressors Using Evolutionary Computation. Journal of Propulsion and Power, 2002, 18, 544-554.	1.3	29
121	Optimal Design of Horizontal-Axis Wind Turbines Using Blade-Element Theory and Evolutionary Computation. Journal of Solar Energy Engineering, Transactions of the ASME, 2002, 124, 357-363.	1.1	127
122	Design optimization of vaned diffusers for centrifugal compressors using genetic algorithms. , 2001, , .		14
123	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