

Joaquim R R A Martins

List of Publications by Year in descending order

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266
papers

12,866
citations

20759

60
h-index

31759

101
g-index

273
all docs

273
docs citations

273
times ranked

4013
citing authors

#	ARTICLE	IF	CITATIONS
1	Multidisciplinary Design Optimization: A Survey of Architectures. AIAA Journal, 2013, 51, 2049-2075.	1.5	747
2	The complex-step derivative approximation. ACM Transactions on Mathematical Software, 2003, 29, 245-262.	1.6	575
3	OpenMDAO: an open-source framework for multidisciplinary design, analysis, and optimization. Structural and Multidisciplinary Optimization, 2019, 59, 1075-1104.	1.7	365
4	Electric, hybrid, and turboelectric fixed-wing aircraft: A review of concepts, models, and design approaches. Progress in Aerospace Sciences, 2019, 104, 1-19.	6.3	362
5	pyOpt: a Python-based object-oriented framework for nonlinear constrained optimization. Structural and Multidisciplinary Optimization, 2012, 45, 101-118.	1.7	353
6	Extensions to the design structure matrix for the description of multidisciplinary design, analysis, and optimization processes. Structural and Multidisciplinary Optimization, 2012, 46, 273-284.	1.7	338
7	Multipoint High-Fidelity Aerostructural Optimization of a Transport Aircraft Configuration. Journal of Aircraft, 2014, 51, 144-160.	1.7	295
8	Review and Unification of Methods for Computing Derivatives of Multidisciplinary Computational Models. AIAA Journal, 2013, 51, 2582-2599.	1.5	266
9	Scalable Parallel Approach for High-Fidelity Steady-State Aeroelastic Analysis and Adjoint Derivative Computations. AIAA Journal, 2014, 52, 935-951.	1.5	235
10	Aerodynamic Shape Optimization Investigations of the Common Research Model Wing Benchmark. AIAA Journal, 2015, 53, 968-985.	1.5	217
11	A Python surrogate modeling framework with derivatives. Advances in Engineering Software, 2019, 135, 102662.	1.8	212
12	High-Fidelity Aerostructural Design Optimization of a Supersonic Business Jet. Journal of Aircraft, 2004, 41, 523-530.	1.7	211
13	A Coupled-Adjoint Sensitivity Analysis Method for High-Fidelity Aero-Structural Design. Optimization and Engineering, 2005, 6, 33-62.	1.3	208
14	Aerodynamic Design Optimization Studies of a Blended-Wing-Body Aircraft. Journal of Aircraft, 2014, 51, 1604-1617.	1.7	182
15	Effective adjoint approaches for computational fluid dynamics. Progress in Aerospace Sciences, 2019, 110, 100542.	6.3	168
16	ADjoint: An Approach for the Rapid Development of Discrete Adjoint Solvers. AIAA Journal, 2008, 46, 863-873.	1.5	167
17	An adaptive approach to constraint aggregation using adjoint sensitivity analysis. Structural and Multidisciplinary Optimization, 2007, 34, 61-73.	1.7	162
18	A CAD-Free Approach to High-Fidelity Aerostructural Optimization. , 2010, , .		145

#	ARTICLE	IF	CITATIONS
19	Multidisciplinary design optimization of offshore wind turbines for minimum levelized cost of energy. <i>Renewable Energy</i> , 2014, 68, 893-905.	4.3	138
20	A parallel finite-element framework for large-scale gradient-based design optimization of high-performance structures. <i>Finite Elements in Analysis and Design</i> , 2014, 87, 56-73.	1.7	123
21	Multimission Aircraft Fuel-Burn Minimization via Multipoint Aerostructural Optimization. <i>AIAA Journal</i> , 2015, 53, 104-122.	1.5	123
22	Benchmark Aerostructural Models for the Study of Transonic Aircraft Wings. <i>AIAA Journal</i> , 2018, 56, 2840-2855.	1.5	115
23	Multidisciplinary Design Optimization for Complex Engineered Systems: Report From a National Science Foundation Workshop. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2011, 133, .	1.7	111
24	Benchmarking multidisciplinary design optimization algorithms. <i>Optimization and Engineering</i> , 2010, 11, 159-183.	1.3	106
25	Aerodynamic Shape Optimization of an Adaptive Morphing Trailing-Edge Wing. <i>Journal of Aircraft</i> , 2015, 52, 1951-1970.	1.7	105
26	On the influence of optimization algorithm and initial design on wing aerodynamic shape optimization. <i>Aerospace Science and Technology</i> , 2018, 75, 183-199.	2.5	103
27	Surrogate models and mixtures of experts in aerodynamic performance prediction for aircraft mission analysis. <i>Aerospace Science and Technology</i> , 2015, 43, 126-151.	2.5	102
28	Stress-constrained topology optimization with design-dependent loading. <i>Structural and Multidisciplinary Optimization</i> , 2012, 46, 647-661.	1.7	96
29	Flutter and post-flutter constraints in aircraft design optimization. <i>Progress in Aerospace Sciences</i> , 2019, 109, 100537.	6.3	94
30	Robust aerodynamic shape optimization – From a circle to an airfoil. <i>Aerospace Science and Technology</i> , 2019, 87, 48-61.	2.5	94
31	An automated method for sensitivity analysis using complex variables. , 2000, , .		93
32	Multipoint Aerodynamic Shape Optimization Investigations of the Common Research Model Wing. <i>AIAA Journal</i> , 2016, 54, 113-128.	1.5	91
33	A Jacobian-free approximate Newton – Krylov startup strategy for RANS simulations. <i>Journal of Computational Physics</i> , 2019, 397, 108741.	1.9	90
34	Efficient Aerodynamic Shape Optimization with Deep-Learning-Based Geometric Filtering. <i>AIAA Journal</i> , 2020, 58, 4243-4259.	1.5	90
35	Open-source coupled aerostructural optimization using Python. <i>Structural and Multidisciplinary Optimization</i> , 2018, 57, 1815-1827.	1.7	89
36	Gradient-enhanced kriging for high-dimensional problems. <i>Engineering With Computers</i> , 2019, 35, 157-173.	3.5	89

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37	A Computational Architecture for Coupling Heterogeneous Numerical Models and Computing Coupled Derivatives. <i>ACM Transactions on Mathematical Software</i> , 2018, 44, 1-39.	1.6	88
38	An aerodynamic design optimization framework using a discrete adjoint approach with OpenFOAM. <i>Computers and Fluids</i> , 2018, 168, 285-303.	1.3	86
39	Aircraft conceptual design for optimal environmental performance. <i>Aeronautical Journal</i> , 2012, 116, 1-22.	1.1	85
40	Model-Predictive Gust Load Alleviation Controller for a Highly Flexible Aircraft. <i>Journal of Guidance, Control, and Dynamics</i> , 2012, 35, 1751-1766.	1.6	85
41	Aerostructural Optimization of Nonplanar Lifting Surfaces. <i>Journal of Aircraft</i> , 2010, 47, 1490-1503.	1.7	84
42	Aeroservoelastic Design Optimization of a Flexible Wing. <i>Journal of Aircraft</i> , 2012, 49, 432-443.	1.7	80
43	Aerodynamic Shape Optimization of Common Research Model Wingâ€“Bodyâ€“Tail Configuration. <i>Journal of Aircraft</i> , 2016, 53, 276-293.	1.7	80
44	Data-Based Approach for Fast Airfoil Analysis and Optimization. <i>AIAA Journal</i> , 2019, 57, 581-596.	1.5	79
45	Automatic Differentiation Adjoint of the Reynolds-Averaged Navier-Stokes Equations with a Turbulence Model. , 2013, , .		78
46	Stability-Constrained Aerodynamic Shape Optimization of Flying Wings. <i>Journal of Aircraft</i> , 2013, 50, 1431-1449.	1.7	77
47	A parallel aerostructural optimization framework for aircraft design studies. <i>Structural and Multidisciplinary Optimization</i> , 2014, 50, 1079-1101.	1.7	77
48	Aerodynamic shape optimization of wind turbine blades using a Reynolds-averaged Navier-Stokes model and an adjoint method. <i>Wind Energy</i> , 2017, 20, 909-926.	1.9	77
49	ADflow: An Open-Source Computational Fluid Dynamics Solver for Aerodynamic and Multidisciplinary Optimization. <i>Journal of Aerospace Information Systems</i> , 2020, 17, 508-527.	1.0	77
50	Rapid airfoil design optimization via neural networks-based parameterization and surrogate modeling. <i>Aerospace Science and Technology</i> , 2021, 113, 106701.	2.5	77
51	Aerostructural optimization of the Common Research Model configuration. , 2014, , .		76
52	Buffet-Onset Constraint Formulation for Aerodynamic Shape Optimization. <i>AIAA Journal</i> , 2017, 55, 1930-1947.	1.5	75
53	A fast-prediction surrogate model for large datasets. <i>Aerospace Science and Technology</i> , 2018, 75, 74-87.	2.5	75
54	Efficient Mesh Generation and Deformation for Aerodynamic Shape Optimization. <i>AIAA Journal</i> , 2021, 59, 1151-1168.	1.5	74

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55	Large-Scale Multidisciplinary Optimization of a Small Satellite's Design and Operation. <i>Journal of Spacecraft and Rockets</i> , 2014, 51, 1648-1663.	1.3	73
56	Concurrent aerostructural topology optimization of a wing box. <i>Computers and Structures</i> , 2014, 134, 1-17.	2.4	71
57	Design of a lithium-ion battery pack for PHEV using a hybrid optimization method. <i>Applied Energy</i> , 2014, 115, 591-602.	5.1	71
58	Aeroservoelastic design definition of a 20MW common research wind turbine model. <i>Wind Energy</i> , 2016, 19, 2071-2087.	1.9	71
59	Adaptive modeling strategy for constrained global optimization with application to aerodynamic wing design. <i>Aerospace Science and Technology</i> , 2019, 90, 85-102.	2.5	69
60	Derivatives for Time-Spectral Computational Fluid Dynamics Using an Automatic Differentiation Adjoint. <i>AIAA Journal</i> , 2012, 50, 2809-2819.	1.5	68
61	Design of a transonic wing with an adaptive morphing trailing edge via aerostructural optimization. <i>Aerospace Science and Technology</i> , 2018, 81, 192-203.	2.5	68
62	Modeling Boundary Layer Ingestion Using a Coupled Aeropropulsive Analysis. <i>Journal of Aircraft</i> , 2018, 55, 1191-1199.	1.7	67
63	The DIRECT algorithm: 25 years Later. <i>Journal of Global Optimization</i> , 2021, 79, 521-566.	1.1	67
64	Multidisciplinary design optimization of large wind turbines—Technical, economic, and design challenges. <i>Energy Conversion and Management</i> , 2016, 123, 56-70.	4.4	63
65	An evaluation of constraint aggregation strategies for wing box mass minimization. <i>Structural and Multidisciplinary Optimization</i> , 2017, 55, 257-277.	1.7	62
66	DAFoam: An Open-Source Adjoint Framework for Multidisciplinary Design Optimization with OpenFOAM. <i>AIAA Journal</i> , 2020, 58, 1304-1319.	1.5	62
67	High-fidelity aerostructural optimization of tow-steered composite wings. <i>Journal of Fluids and Structures</i> , 2019, 88, 122-147.	1.5	60
68	On manufacturing constraints for tow-steered composite design optimization. <i>Composite Structures</i> , 2018, 204, 548-559.	3.1	59
69	Tilt-Wing eVTOL Takeoff Trajectory Optimization. <i>Journal of Aircraft</i> , 2020, 57, 93-112.	1.7	59
70	Optimization of a Single Lithium-Ion Battery Cell with a Gradient-Based Algorithm. <i>Journal of the Electrochemical Society</i> , 2013, 160, A1071-A1078.	1.3	57
71	Structural topology optimization with design-dependent pressure loads. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2012, 233-236, 40-48.	3.4	51
72	Automatic Evaluation of Multidisciplinary Derivatives Using a Graph-Based Problem Formulation in OpenMDAO., 2014, , .		50

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73	An asymmetric suboptimization approach to Aerostructural optimization. Optimization and Engineering, 2009, 10, 133-152.	1.3	49
74	High-fidelity multipoint hydrostructural optimization of a 3-D hydrofoil. Journal of Fluids and Structures, 2017, 71, 15-39.	1.5	49
75	Coupled aeropropulsive design optimisation of a boundary-layer ingestion propulsor. Aeronautical Journal, 2019, 123, 121-137.	1.1	49
76	Scalable gradient-enhanced artificial neural networks for airfoil shape design in the subsonic and transonic regimes. Structural and Multidisciplinary Optimization, 2020, 61, 1363-1376.	1.7	49
77	Multipoint high-fidelity CFD-based aerodynamic shape optimization of a 10-MW wind turbine. Wind Energy Science, 2019, 4, 163-192.	1.2	49
78	Natural Laminar-Flow Airfoil Optimization Design Using a Discrete Adjoint Approach. AIAA Journal, 2020, 58, 4702-4722.	1.5	48
79	Aerodynamic design optimization: Challenges and perspectives. Computers and Fluids, 2022, 239, 105391.	1.3	48
80	An Efficient Parallel Overset Method for Aerodynamic Shape Optimization. , 2017, , .		47
81	Expected drag minimization for aerodynamic design optimization based on aircraft operational data. Aerospace Science and Technology, 2017, 63, 344-362.	2.5	47
82	RANS-Based Aerodynamic Shape Optimization of a Strut-Braced Wing with Overset Meshes. Journal of Aircraft, 2019, 56, 217-227.	1.7	47
83	Integrated design optimization of spar floating wind turbines. Marine Structures, 2020, 72, 102771.	1.6	47
84	Multimodality in Aerodynamic Wing Design Optimization. AIAA Journal, 2019, 57, 1004-1018.	1.5	44
85	A coupled aero-structural optimization method for complete aircraft configurations. , 1999, , .		43
86	A Comparison of Metallic and Composite Aircraft Wings Using Aerostructural Design Optimization. , 2012, , .		43
87	A Surrogate-Based Multi-Scale Model for Mass Transport and Electrochemical Kinetics in Lithium-Ion Battery Electrodes. Journal of the Electrochemical Society, 2014, 161, E3086-E3096.	1.3	41
88	High-Fidelity Aero-Structural Design Optimization of a Supersonic Business Jet. , 2002, , .		40
89	A laminate parametrization technique for discrete ply-angle problems with manufacturing constraints. Structural and Multidisciplinary Optimization, 2013, 48, 379-393.	1.7	40
90	Aerostructural Shape Optimization of Wind Turbine Blades Considering Site-Specific Winds. , 2008, , .		39

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91	Structural topology optimization for multiple load cases using a dynamic aggregation technique. <i>Engineering Optimization</i> , 2009, 41, 1103-1118.	1.5	39
92	Stress-based topology optimization using an isoparametric level set method. <i>Finite Elements in Analysis and Design</i> , 2012, 58, 20-30.	1.7	39
93	Multidisciplinary Design Optimization Framework with Coupled Derivative Computation for Hybrid Aircraft. <i>Journal of Aircraft</i> , 2020, 57, 715-729.	1.7	39
94	Parallel Solution Methods for Aerostructural Analysis and Design Optimization. , 2010, , .		38
95	Experimental investigation of a hydrofoil designed via hydrostructural optimization. <i>Journal of Fluids and Structures</i> , 2019, 84, 243-262.	1.5	38
96	High-Fidelity Aero-Structural Design Using a Parametric CAD-Based Model. , 2003, , .		37
97	RANS-based Aerodynamic Shape Optimization Investigations of the Common Research Model Wing. , 2014, , .		37
98	A methodology for the development of discrete adjoint solvers using automatic differentiation tools. <i>International Journal of Computational Fluid Dynamics</i> , 2007, 21, 307-327.	0.5	34
99	High-Fidelity Design-Allocation Optimization of a Commercial Aircraft Maximizing Airline Profit. <i>Journal of Aircraft</i> , 2019, 56, 1164-1178.	1.7	34
100	Impact of Morphing Trailing Edges on Mission Performance for the Common Research Model. <i>Journal of Aircraft</i> , 2019, 56, 369-384.	1.7	33
101	Aerostructural Tradeoffs for Tow-Steered Composite Wings. <i>Journal of Aircraft</i> , 2020, 57, 787-799.	1.7	32
102	Complete Configuration Aero-Structural Optimization Using a Coupled Sensitivity Analysis Method. , 2002, , .		31
103	Component-Based Geometry Manipulation for Aerodynamic Shape Optimization with Overset Meshes. <i>AIAA Journal</i> , 2018, 56, 3667-3679.	1.5	31
104	High-Fidelity Hydrodynamic Shape Optimization of a 3-D Hydrofoil. <i>Journal of Ship Research</i> , 2015, 59, 209-226.	0.5	30
105	High-fidelity Multipoint Aerostructural Optimization of a High Aspect Ratio Tow-steered Composite Wing. , 2017, , .		29
106	pyMDO: A Framework for High-Fidelity Multi-Disciplinary Optimization. , 2004, , .		28
107	On the Common Structure of MDO Problems: A Comparison of Architectures. , 2006, , .		28
108	Computation of Aircraft Stability Derivatives Using an Automatic Differentiation Adjoint Approach. <i>AIAA Journal</i> , 2011, 49, 2737-2750.	1.5	28

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109	A Timoshenko beam theory with pressure corrections for layered orthotropic beams. <i>International Journal of Solids and Structures</i> , 2011, 48, 2373-2382.	1.3	28
110	Chemical-Equilibrium Analysis with Adjoint Derivatives for Propulsion Cycle Analysis. <i>Journal of Propulsion and Power</i> , 2017, 33, 1041-1052.	1.3	27
111	Coupled Aeropropulsive Optimization of a Three-Dimensional Boundary-Layer Ingestion Propulsor Considering Inlet Distortion. <i>Journal of Aircraft</i> , 2020, 57, 1014-1025.	1.7	27
112	GeoMACH: Geometry-Centric MDAO of Aircraft Configurations with High Fidelity. , 2012, , .		26
113	Energy Density Comparison of Li-ion Cathode Materials Using Dimensional Analysis. <i>Journal of the Electrochemical Society</i> , 2013, 160, A1187-A1193.	1.3	26
114	Data-driven constraint approach to ensure low-speed performance in transonic aerodynamic shape optimization. <i>Aerospace Science and Technology</i> , 2019, 92, 536-550.	2.5	26
115	High-Fidelity Hydrodynamic Shape Optimization of a 3-D Hydrofoil. <i>Journal of Ship Research</i> , 2015, 59, 209-226.	0.5	26
116	An isoparametric approach to level set topology optimization using a body-fitted finite-element mesh. <i>Computers and Structures</i> , 2012, 90-91, 97-106.	2.4	25
117	Computing Stability Derivatives and Their Gradients for Aerodynamic Shape Optimization. <i>AIAA Journal</i> , 2014, 52, 2533-2546.	1.5	25
118	RANS-Based Aerodynamic Shape Optimization of a Wing Considering Propeller-Wing Interaction. <i>Journal of Aircraft</i> , 2021, 58, 497-513.	1.7	25
119	pyMDO. <i>ACM Transactions on Mathematical Software</i> , 2009, 36, 1-25.	1.6	23
120	Viscous fluid-structure interaction response of composite hydrofoils. <i>Composite Structures</i> , 2019, 212, 571-585.	3.1	23
121	Adjoint-based aerodynamic shape optimization including transition to turbulence effects. <i>Aerospace Science and Technology</i> , 2020, 107, 106243.	2.5	23
122	pyACDT: An Object-Oriented Framework for Aircraft Design Modelling and Multidisciplinary Optimization. , 2008, , .		22
123	Simultaneous optimization of propeller-hull systems to minimize lifetime fuel consumption. <i>Applied Ocean Research</i> , 2013, 43, 46-52.	1.8	22
124	Aerothermal optimization of a ribbed U-bend cooling channel using the adjoint method. <i>International Journal of Heat and Mass Transfer</i> , 2019, 140, 152-172.	2.5	22
125	Aerodynamic Shape Optimization of a Blended-Wing-Body Aircraft. , 2013, , .		21
126	Aerostructural design optimization of a 100-passenger regional jet with surrogate-based mission analysis. , 2013, , .		21

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127	Allocation-mission-design optimization of next-generation aircraft using a parallel computational framework. , 2016, , .		21
128	Aerostructural Optimization of the D8 Wing with Varying Cruise Mach Numbers. , 2017, , .		21
129	Design and Trajectory Optimization of a Morphing Wing Aircraft. , 2018, , .		20
130	Computational Modeling of Flutter Constraint for High-Fidelity Aerostructural Optimization. , 2019, , .		19
131	Boundary-Layer Ingestion Benefit for the STARC-ABL Concept. Journal of Aircraft, 2022, 59, 896-911.	1.7	19
132	Aero-structural optimization using adjoint coupled post-optimality sensitivities. Structural and Multidisciplinary Optimization, 2008, 36, 59-70.	1.7	18
133	Multi-point, multi-mission, high-fidelity aerostructural optimization of a long-range aircraft configuration. , 2012, , .		18
134	Aerostructural design optimization of a continuous morphing trailing edge aircraft for improved mission performance. , 2016, , .		18
135	Optimization of LiMn2O4 electrode properties in a gradient- and surrogate-based framework. Acta Mechanica Sinica/Lixue Xuebao, 2013, 29, 335-347.	1.5	17
136	Aerostructural Design Optimization of an Adaptive Morphing Trailing Edge Wing. , 2015, , .		17
137	Approach to Modeling Boundary Layer Ingestion using a Fully Coupled Propulsion-RANS Model. , 2017, , .		17
138	A Mixed Integer Efficient Global Optimization Algorithm for the Simultaneous Aircraft Allocation-Mission-Design Problem. , 2017, , .		17
139	Aero-propulsive Design Optimization of a Turboelectric Boundary Layer Ingestion Propulsion System. , 2018, , .		17
140	Aerodynamic Shape Optimization with Time Spectral Flutter Adjoint. , 2019, , .		17
141	A B-Spline-based Generative Adversarial Network Model for Fast Interactive Airfoil Aerodynamic Optimization. , 2020, , .		17
142	Variable-complexity optimization applied to airfoil design. Engineering Optimization, 2007, 39, 271-286.	1.5	16
143	An Object-Oriented Framework for Multidisciplinary Design Optimization. , 2007, , .		16
144	Reducing Aviation's Environmental Impact Through Large Aircraft for Short Ranges. , 2010, , .		16

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145	High-Fidelity Aerostructural Optimization Considering Buffet Onset. , 2015, , .		16
146	Performance Evaluation of a Morphing Trailing Edge Using Multipoint Aerostructural Design Optimization. , 2016, , .		16
147	High-fidelity Aerostructural Optimization of a High Aspect Ratio Tow-steered Wing. , 2016, , .		16
148	Geometrically Nonlinear High-fidelity Aerostructural Optimization for Highly Flexible Wings. , 2021, , .		16
149	High Aspect Ratio Wing Design: Optimal Aerostructural Tradeoffs for the Next Generation of Materials. , 2014, , .		15
150	A modular adjoint approach to aircraft mission analysis and optimization. , 2015, , .		15
151	An adaptive optimization strategy based on mixture of experts for wing aerodynamic design optimization. , 2017, , .		15
152	Aerostructural Design Exploration of a Wing in Transonic Flow. Aerospace, 2020, 7, 118.	1.1	15
153	RANS-based Aerodynamic Shape Optimization of a Blended-Wing-Body Aircraft. , 2013, , .		14
154	Optimization of Flexible Flapping-Wing Kinematics in Hover. AIAA Journal, 2014, 52, 2342-2354.	1.5	14
155	A novel approach to discrete truss design problems using mixed integer neighborhood search. Structural and Multidisciplinary Optimization, 2018, 58, 2411-2429.	1.7	14
156	Sweep and anisotropy effects on the viscous hydroelastic response of composite hydrofoils. Composite Structures, 2019, 230, 111471.	3.1	14
157	Design optimization for self-propulsion of a bulk carrier hull using a discrete adjoint method. Computers and Fluids, 2019, 192, 104259.	1.3	14
158	Low-Fidelity Aerostructural Optimization of Aircraft Wings with a Simplified Wingbox Model Using OpenAeroStruct. , 2019, , 418-431.		14
159	A homogenization-based theory for anisotropic beams with accurate through-section stress and strain prediction. International Journal of Solids and Structures, 2012, 49, 54-72.	1.3	13
160	Towards Gradient-Based Design Optimization of Flexible Transport Aircraft with Flutter Constraints. , 2014, , .		13
161	Undeformed Common Research Model (uCRM): An Aerostructural Model for the Study of High Aspect Ratio Transport Aircraft Wings. , 2017, , .		13
162	Aeropropulsive Design Optimization of a Boundary Layer Ingestion System. , 2019, , .		13

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163	High-Reynolds number transitional flow simulation via parabolized stability equations with an adaptive RANS solver. <i>Aerospace Science and Technology</i> , 2019, 91, 321-336.	2.5	13
164	A Coupled Newton-Krylov Time Spectral Solver for Wing Flutter and LCO Prediction. , 2019, , .		13
165	High-fidelity Aerostructural Optimization Studies of the Aerion AS2 Supersonic Business Jet. , 2020, , .		13
166	Coupled Newton-Krylov Time-Spectral Solver for Flutter and Limit Cycle Oscillation Prediction. <i>AIAA Journal</i> , 2021, 59, 2214-2232.	1.5	13
167	Large-Scale MDO of a Small Satellite using a Novel Framework for the Solution of Coupled Systems and their Derivatives. , 2013, , .		12
168	Simultaneous aircraft allocation and mission optimization using a modular adjoint approach. , 2015, , .		12
169	A Coupled Newton-Krylov Time Spectral Solver for Flutter Prediction. , 2018, , .		12
170	Next generation aircraft design considering airline operations and economics. , 2018, , .		12
171	Trajectory Optimization of a Supersonic Aircraft with a Thermal Fuel Management System. , 2018, , .		12
172	Parallel allocation-mission optimization of a 128-route network. , 2015, , .		12
173	Geometry and Structural Modeling for High-Fidelity Aircraft Conceptual Design Optimization. , 2014, , .		11
174	Multipoint Aerodynamic Shape Optimization Investigations of the Common Research Model Wing. , 2015, , .		11
175	Transition Prediction in a RANS Solver based on Linear Stability Theory for Complex Three-Dimensional Configurations. , 2018, , .		11
176	Monolithic Approach for Next-Generation Aircraft Design Considering Airline Operations and Economics. <i>Journal of Aircraft</i> , 2019, 56, 1565-1576.	1.7	11
177	Multi-fidelity efficient global optimization: Methodology and application to airfoil shape design. , 2019, , .		11
178	Multipoint Aerodynamic Shape Optimization for Subsonic and Supersonic Regimes. <i>Journal of Aircraft</i> , 2021, 58, 650-662.	1.7	11
179	Natural laminar flow wing optimization using a discrete adjoint approach. <i>Structural and Multidisciplinary Optimization</i> , 2021, 64, 541-562.	1.7	11
180	Thermal Management System Optimization for a Parallel Hybrid Aircraft Considering Mission Fuel Burn. <i>Aerospace</i> , 2022, 9, 243.	1.1	11

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181	An Adjoint-based Derivative Evaluation Method for Time-dependent Aeroelastic Optimization of Flexible Aircraft. , 2013, , .		10
182	Aerodynamic Shape Optimization of a Truss-Braced-Wing Aircraft. , 2015, , .		10
183	Aerodynamic Shape Optimization of the CRM Configuration Including Buffet-Onset Conditions. , 2016, , .		10
184	High-Fidelity Aerodynamic Shape Optimization of a Full Configuration Regional Jet. , 2018, , .		10
185	Perspectives on aerodynamic design optimization. , 2020, , .		10
186	Toward Automatic Parabolized Stability Equation-Based Transition-to-Turbulence Prediction for Aerodynamic Flows. AIAA Journal, 2021, 59, 462-473.	1.5	10
187	Aerodynamic shape optimization of an electric aircraft motor surface heat exchanger with conjugate heat transfer constraint. International Journal of Heat and Mass Transfer, 2022, 189, 122689.	2.5	10
188	Matrix-free aerostructural optimization of aircraft wings. Structural and Multidisciplinary Optimization, 2016, 53, 589-603.	1.7	9
189	A data-based approach for fast airfoil analysis and optimization. , 2018, , .		9
190	Flexible Formulation of Spatial Integration Constraints in Aerodynamic Shape Optimization. AIAA Journal, 2020, 58, 2571-2580.	1.5	9
191	3-D high-fidelity hydrostructural optimization of cavitation-free composite lifting surfaces. Composite Structures, 2021, 268, 113937.	3.1	9
192	Aerodynamic Shape Optimization of an Adaptive Morphing Trailing Edge Wing. , 2014, , .		8
193	Surrogate Models and Mixtures of Experts in Aerodynamic Performance Prediction for Mission Analysis. , 2014, , .		8
194	Thermodynamics For Gas Turbine Cycles With Analytic Derivatives in OpenMDAO. , 2016, , .		8
195	Multimodality in Aerodynamic Wing Design Optimization. , 2017, , .		8
196	Multifidelity Optimization Under Uncertainty for a Tailless Aircraft. , 2018, , .		8
197	An Object-oriented Framework for Rapid Discrete Adjoint Development using OpenFOAM. , 2019, , .		8
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