Joaquim R R A Martins

List of Publications by Year
in descending order

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	Minimum lap time trajectory optimisation of performance vehicles with four-wheel drive and active aerodynamic control. Vehicle System Dynamics, 2023, 61, 2103-2119.	2.2	3
2	A surface mesh deformation method near component intersections for high-fidelity design optimization. Engineering With Computers, 2022, 38, 1393-1425.	3.5	6
3	Discrete multi-load truss sizing optimization: model analysis and computational experiments. Optimization and Engineering, 2022, 23, 1559-1585.	1.3	7
4	Linear Stability-Based Smooth Reynolds-Averaged Navier–Stokes Transition Model for Aerodynamic Flows. AIAA Journal, 2022, 60, 1077-1090.	1.5	5
5	Scaling the dynamic response and stability of composite hydrodynamic lifting surfaces. Composite Structures, 2022, 285, 115148.	3.1	3
6	Boundary-Layer Ingestion Benefit for the STARC-ABL Concept. Journal of Aircraft, 2022, 59, 896-911.	1.7	19
7	Predicting the High-Angle-of-Attack Characteristics of a Delta Wing at Low Speed. Journal of Aircraft, 2022, 59, 1071-1081.	1.7	3
8	Derivatives for Eigenvalues and Eigenvectors via Analytic Reverse Algorithmic Differentiation. AIAA Journal, 2022, 60, 2654-2667.	1.5	4
9	A Gradient-based Sequential Multifidelity Approach to Multidisciplinary Design Optimization. Structural and Multidisciplinary Optimization, 2022, 65, 1.	1.7	5
10	Aerodynamic design optimization: Challenges and perspectives. Computers and Fluids, 2022, 239, 105391.	1.3	48
11	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
12	Thermal Management System Optimization for a Parallel Hybrid Aircraft Considering Mission Fuel Burn. Aerospace, 2022, 9, 243.	1.1	11
13	Physics-Based Data-Driven Buffet-Onset Constraint for Aerodynamic Shape Optimization. AIAA Journal, 2022, 60, 4775-4788.	1.5	7
14	Mixed-integer second-order cone optimization for composite discrete ply-angle and thickness topology optimization problems. Optimization and Engineering, 2021, 22, 1589-1624.	1.3	2
15	Truss topology design and sizing optimization with guaranteed kinematic stability. Structural and Multidisciplinary Optimization, 2021, 63, 21-38.	1.7	6
16	The DIRECT algorithm: 25 years Later. Journal of Global Optimization, 2021, 79, 521-566.	1.1	67
17	Toward Automatic Parabolized Stability Equation-Based Transition-to-Turbulence Prediction for Aerodynamic Flows. AIAA Journal, 2021, 59, 462-473.	1.5	10
18	Aerostructural Wing Optimization for a Hydrogen Fuel Cell Aircraft. , 2021, , .		7

#	Article	IF	Citations
19	An efficient nonlinear reduced-order modeling approach for rapid aerodynamic analysis with OpenFOAM. , 2021, , .		1
20	A hybrid time-spectral approach for aerodynamic shape optimization with unsteady flow. , 2021, , .		2
21	Aeroelastic scaling of flying demonstrator: flutter matching. Mechanics and Industry, 2021, 22, 42.	0.5	4
22	Geometrically Nonlinear High-fidelity Aerostructural Optimization for Highly Flexible Wings. , 2021, , .		16
23	An MDO-based methodology for static aeroelastic scaling of wings under non-similar flow. Structural and Multidisciplinary Optimization, 2021, 63, 1045-1061.	1.7	7
24	Efficient Mesh Generation and Deformation for Aerodynamic Shape Optimization. AIAA Journal, 2021, 59, 1151-1168.	1.5	74
25	Multipoint Aerodynamic Shape Optimization for Subsonic and Supersonic Regimes. Journal of Aircraft, 2021, 58, 650-662.	1.7	11
26	RANS-Based Aerodynamic Shape Optimization of a Wing Considering Propeller–Wing Interaction. Journal of Aircraft, 2021, 58, 497-513.	1.7	25
27	Coupled Newton–Krylov Time-Spectral Solver for Flutter and Limit Cycle Oscillation Prediction. AIAA Journal, 2021, 59, 2214-2232.	1.5	13
28	Natural laminar flow wing optimization using a discrete adjoint approach. Structural and Multidisciplinary Optimization, 2021, 64, 541-562.	1.7	11
29	Rapid airfoil design optimization via neural networks-based parameterization and surrogate modeling. Aerospace Science and Technology, 2021, 113, 106701.	2.5	77
30	3-D high-fidelity hydrostructural optimization of cavitation-free composite lifting surfaces. Composite Structures, 2021, 268, 113937.	3.1	9
31	Accelerating parallel CFD codes on modern vector processors using blockettes. , 2021, , .		0
32	Performance Analysis of Optimized STARC-ABL Designs Across the Entire Mission Profile. , 2021, , .		5
33	Enabling large-scale multidisciplinary design optimization through adjoint sensitivity analysis. Structural and Multidisciplinary Optimization, 2021, 64, 2959-2974.	1.7	6
34	Hydrostructural Optimization of Generic Composite Hydrofoils. , 2020, , .		0
35	Tilt-Wing eVTOL Takeoff Trajectory Optimization. Journal of Aircraft, 2020, 57, 93-112.	1.7	59
36	Aerothermal Optimization of X-57 High-Lift Motor Nacelle. , 2020, , .		1

#	Article	IF	Citations
37	Natural Laminar-Flow Airfoil Optimization Design Using a Discrete Adjoint Approach. AIAA Journal, 2020, 58, 4702-4722.	1.5	48
38	Adjoint-based aerodynamic shape optimization including transition to turbulence effects. Aerospace Science and Technology, 2020, 107, 106243.	2.5	23
39	Coupled Aeropropulsive Optimization of a Three-Dimensional Boundary-Layer Ingestion Propulsor Considering Inlet Distortion. Journal of Aircraft, 2020, 57, 1014-1025.	1.7	27
40	Design Optimization of Spar Floating Wind Turbines Considering Different Control Strategies. Journal of Physics: Conference Series, 2020, 1669, 012010.	0.3	5
41	Large-Scale Path-Dependent Optimization of Supersonic Aircraft. Aerospace, 2020, 7, 152.	1.1	8
42	Aerostructural Design Exploration of a Wing in Transonic Flow. Aerospace, 2020, 7, 118.	1.1	15
43	Integrated design optimization of spar floating wind turbines. Marine Structures, 2020, 72, 102771.	1.6	47
44	Aerostructural Tradeoffs for Tow-Steered Composite Wings. Journal of Aircraft, 2020, 57, 787-799.	1.7	32
45	Aerostructural Wing Design Exploration with Multidisciplinary Design Optimization. , 2020, , .		6
46	Flexible Formulation of Spatial Integration Constraints in Aerodynamic Shape Optimization. AIAA Journal, 2020, 58, 2571-2580.	1.5	9
47	A B-Spline-based Generative Adversarial Network Model for Fast Interactive Airfoil Aerodynamic Optimization. , 2020, , .		17
48	RANS-based aerodynamic shape optimization of a wing considering propeller-wing interaction. , 2020, , .		2
49	A Time-Spectral Adjoint Approach for Aerodynamic Shape Optimization Under Periodic Wakes. , 2020, , .		1
50	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
51	High-fidelity Aerostructural Optimization Studies of the Aerion AS2 Supersonic Business Jet. , 2020, , .		13
52	Multidisciplinary Design Optimization Framework with Coupled Derivative Computation for Hybrid Aircraft. Journal of Aircraft, 2020, 57, 715-729.	1.7	39
53	ADflow: An Open-Source Computational Fluid Dynamics Solver for Aerodynamic and Multidisciplinary Optimization. Journal of Aerospace Information Systems, 2020, 17, 508-527.	1.0	77
54	Efficient Aerodynamic Shape Optimization with Deep-Learning-Based Geometric Filtering. AIAA Journal, 2020, 58, 4243-4259.	1.5	90

#	Article	IF	Citations
55	DAFoam: An Open-Source Adjoint Framework for Multidisciplinary Design Optimization with OpenFOAM. AIAA Journal, 2020, 58, 1304-1319.	1.5	62
56	Perspectives on aerodynamic design optimization. , 2020, , .		10
57	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
58	Coupled component sizing and aerodynamic shape optimization via geometric constraints. , 2019, , .		5
59	A Python surrogate modeling framework with derivatives. Advances in Engineering Software, 2019, 135, 102662.	1.8	212
60	Sweep and anisotropy effects on the viscous hydroelastic response of composite hydrofoils. Composite Structures, 2019, 230, 111471.	3.1	14
61	Monolithic Approach for Next-Generation Aircraft Design Considering Airline Operations and Economics. Journal of Aircraft, 2019, 56, 1565-1576.	1.7	11
62	Effective adjoint approaches for computational fluid dynamics. Progress in Aerospace Sciences, 2019, 110, 100542.	6.3	168
63	Multi-fidelity efficient global optimization: Methodology and application to airfoil shape design. , 2019, , .		11
64	Aeropropulsive Design Optimization of a Boundary Layer Ingestion System. , 2019, , .		13
65	Design optimization for self-propulsion of a bulk carrier hull using a discrete adjoint method. Computers and Fluids, 2019, 192, 104259.	1.3	14
66	Computational Modeling of Flutter Constraint for High-Fidelity Aerostructural Optimization. , 2019, , .		19
67	Aerodynamic Shape Optimization with Time Spectral Flutter Adjoint. , 2019, , .		17
68	High-Fidelity Design-Allocation Optimization of a Commercial Aircraft Maximizing Airline Profit. Journal of Aircraft, 2019, 56, 1164-1178.	1.7	34
69	An Object-oriented Framework for Rapid Discrete Adjoint Development using OpenFOAM. , 2019, , .		8
70	High-fidelity aerostructural optimization of tow-steered composite wings. Journal of Fluids and Structures, 2019, 88, 122-147.	1.5	60
71	Data-driven constraint approach to ensure low-speed performance in transonic aerodynamic shape optimization. Aerospace Science and Technology, 2019, 92, 536-550.	2.5	26
72	Aerothermal optimization of a ribbed U-bend cooling channel using the adjoint method. International Journal of Heat and Mass Transfer, 2019, 140, 152-172.	2.5	22

#	Article	IF	Citations
73	Flutter and post-flutter constraints in aircraft design optimization. Progress in Aerospace Sciences, 2019, 109, 100537.	6.3	94
74	A Jacobian-free approximate Newton–Krylov startup strategy for RANS simulations. Journal of Computational Physics, 2019, 397, 108741.	1.9	90
75	High-Reynolds number transitional flow simulation via parabolized stability equations with an adaptive RANS solver. Aerospace Science and Technology, 2019, 91, 321-336.	2.5	13
76	Adaptive modeling strategy for constrained global optimization with application to aerodynamic wing design. Aerospace Science and Technology, 2019, 90, 85-102.	2.5	69
77	Enabling Large-scale Multidisciplinary Design Optimization through Adjoint Sensitivity Analysis. , 2019, , .		4
78	OpenMDAO: an open-source framework for multidisciplinary design, analysis, and optimization. Structural and Multidisciplinary Optimization, 2019, 59, 1075-1104.	1.7	365
79	Robust aerodynamic shape optimization–From a circle to an airfoil. Aerospace Science and Technology, 2019, 87, 48-61.	2.5	94
80	How Certain Physical Considerations Impact Aerostructural Wing Optimization. , 2019, , .		2
81	A Coupled Newton-Krylov Time Spectral Solver for Wing Flutter and LCO Prediction. , 2019, , .		13
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	Experimental investigation of a hydrofoil designed via hydrostructural optimization. Journal of Fluids and Structures, 2019, 84, 243-262.	1.5	38
84	Multimodality in Aerodynamic Wing Design Optimization. AIAA Journal, 2019, 57, 1004-1018.	1.5	44
85	Viscous fluid–structure interaction response of composite hydrofoils. Composite Structures, 2019, 212, 571-585.	3.1	23
86	Multipoint Variable Cycle Engine Design Using Gradient-Based Optimization. , 2019, , .		4
87	Multipoint Aerodynamic Shape Optimization for Subsonic and Supersonic Regimes. , 2019, , .		8
88	High-Reynolds Number Transitional Flow Prediction using a Coupled Discontinuous-Galerkin RANS PSE Framework. , 2019, , .		0
89	Flexible Formulation of Spatial Integration Constraints in Aerodynamic Shape Optimization. , 2019, , .		6
90	Data-Based Approach for Fast Airfoil Analysis and Optimization. AIAA Journal, 2019, 57, 581-596.	1.5	79

#	Article	IF	Citations
91	Impact of Morphing Trailing Edges on Mission Performance for the Common Research Model. Journal of Aircraft, 2019, 56, 369-384.	1.7	33
92	Coupled aeropropulsive design optimisation of a boundary-layer ingestion propulsor. Aeronautical Journal, 2019, 123, 121-137.	1.1	49
93	Gradient-enhanced kriging for high-dimensional problems. Engineering With Computers, 2019, 35, 157-173.	3.5	89
94	Low-Fidelity Aerostructural Optimization of Aircraft Wings with a Simplified Wingbox Model Using OpenAeroStruct. , 2019, , 418-431.		14
95	Multipoint high-fidelity CFD-based aerodynamic shape optimization of a 10‰MW wind turbine. Wind Energy Science, 2019, 4, 163-192.	1.2	49
96	An aerodynamic design optimization framework using a discrete adjoint approach with OpenFOAM. Computers and Fluids, 2018, 168, 285-303.	1.3	86
97	On the influence of optimization algorithm and initial design on wing aerodynamic shape optimization. Aerospace Science and Technology, 2018, 75, 183-199.	2.5	103
98	Open-source coupled aerostructural optimization using Python. Structural and Multidisciplinary Optimization, 2018, 57, 1815-1827.	1.7	89
99	Benchmarking Approaches for the Multidisciplinary Analysis of Complex Systems Using a Taylor Series-Based Scalable Problem. , 2018, , 98-116.		2
100	A data-based approach for fast airfoil analysis and optimization. , 2018, , .		9
101	A Coupled Newton--Krylov Time Spectral Solver for Flutter Prediction. , 2018, , .		12
102	A fast-prediction surrogate model for large datasets. Aerospace Science and Technology, 2018, 75, 74-87.	2.5	75
103	High-Fidelity Aerodynamic Shape Optimization of a Full Configuration Regional Jet. , 2018, , .		10
104	RANS-based Aerodynamic Shape Optimization of a Strut-braced Wing with Overset Meshes. , 2018, , .		5
105	Transition Prediction in a RANS Solver based on Linear Stability Theory for Complex Three-Dimensional Configurations. , 2018, , .		11
106	Multifidelity Optimization Under Uncertainty for a Tailless Aircraft. , 2018, , .		8
107	Modeling Boundary Layer Ingestion Using a Coupled Aeropropulsive Analysis. Journal of Aircraft, 2018, 55, 1191-1199.	1.7	67
108	Design and Trajectory Optimization of a Morphing Wing Aircraft. , 2018, , .		20

#	Article	IF	Citations
109	Next generation aircraft design considering airline operations and economics. , 2018, , .		12
110	A novel approach to discrete truss design problems using mixed integer neighborhood search. Structural and Multidisciplinary Optimization, 2018, 58, 2411-2429.	1.7	14
111	Component-Based Geometry Manipulation for Aerodynamic Shape Optimization with Overset Meshes. AIAA Journal, 2018, 56, 3667-3679.	1.5	31
112	Enabling Modular Aerostructural Optimization: Individual Discipline Feasible without the Jacobians. , 2018, , .		3
113	Aerothermal Optimization of Internal Cooling Passages Using a Discrete Adjoint Method. , 2018, , .		7
114	An automated selection algorithm for nonlinear solvers in MDO. Structural and Multidisciplinary Optimization, 2018, 58, 349-377.	1.7	7
115	Aero-propulsive Design Optimization of a Turboelectric Boundary Layer Ingestion Propulsion System. , 2018, , .		17
116	Trajectory Optimization of a Supersonic Aircraft with a Thermal Fuel Management System. , 2018, , .		12
117	Design of a transonic wing with an adaptive morphing trailing edge via aerostructural optimization. Aerospace Science and Technology, 2018, 81, 192-203.	2.5	68
118	On manufacturing constraints for tow-steered composite design optimization. Composite Structures, 2018, 204, 548-559.	3.1	59
119	A Computational Architecture for Coupling Heterogeneous Numerical Models and Computing Coupled Derivatives. ACM Transactions on Mathematical Software, 2018, 44, 1-39.	1.6	88
120	Benchmark Aerostructural Models for the Study of Transonic Aircraft Wings. AIAA Journal, 2018, 56, 2840-2855.	1.5	115
121	An Efficient Parallel Overset Method for Aerodynamic Shape Optimization. , 2017, , .		47
122	Similarity Maximization of a Scaled Aeroelastic Flight Demonstrator via Multidisciplinary Optimization. , 2017, , .		5
123	High-fidelity Multipoint Aerostructural Optimization of a High Aspect Ratio Tow-steered Composite Wing. , 2017, , .		29
124	Approach to Modeling Boundary Layer Ingestion using a Fully Coupled Propulsion-RANS Model. , 2017, , .		17
125	Expected drag minimization for aerodynamic design optimization based on aircraft operational data. Aerospace Science and Technology, 2017, 63, 344-362.	2.5	47
126	Chemical-Equilibrium Analysis with Adjoint Derivatives for Propulsion Cycle Analysis. Journal of Propulsion and Power, 2017, 33, 1041-1052.	1.3	27

#	Article	IF	Citations
127	A Mixed Integer Efficient Global Optimization Algorithm for the Simultaneous Aircraft Allocation-Mission-Design Problem. , 2017, , .		17
128	Buffet-Onset Constraint Formulation for Aerodynamic Shape Optimization. AIAA Journal, 2017, 55, 1930-1947.	1.5	75
129	On the Consequences of the "No Free Lunch" Theorem for Optimization on the Choice of an Appropriate MDO Architecture. , 2017, , .		7
130	Multimodality in Aerodynamic Wing Design Optimization. , 2017, , .		8
131	High-fidelity multipoint hydrostructural optimization of a 3-D hydrofoil. Journal of Fluids and Structures, 2017, 71, 15-39.	1.5	49
132	Aerodynamic shape optimization of wind turbine blades using a Reynolds-averaged Navier-Stokes model and an adjoint method. Wind Energy, 2017, 20, 909-926.	1.9	77
133	Component-based Geometry Manipulation for Aerodynamic Shape Optimization with Overset Meshes. , 2017, , .		5
134	Aerostructural Optimization of the D8 Wing with Varying Cruise Mach Numbers. , 2017, , .		21
135	Development of Flutter Constraints for High-fidelity Aerostructural Optimization. , 2017, , .		5
136	Undeflected Common Research Model (uCRM): An Aerostructural Model for the Study of High Aspect Ratio Transport Aircraft Wings. , 2017, , .		13
137	An adaptive optimization strategy based on mixture of experts for wing aerodynamic design optimization. , 2017, , .		15
138	An evaluation of constraint aggregation strategies for wing box mass minimization. Structural and Multidisciplinary Optimization, 2017, 55, 257-277.	1.7	62
139	Multipoint Aerodynamic Shape Optimization Investigations of the Common Research Model Wing. AIAA Journal, 2016, 54, 113-128.	1.5	91
140	An unstructured quadrilateral mesh generation algorithm for aircraft structures. Aerospace Science and Technology, 2016, 59, 172-182.	2.5	7
141	Aeroservoelastic design definition of a 20ÂMW common research wind turbine model. Wind Energy, 2016, 19, 2071-2087.	1.9	71
142	Matrix-free aerostructural optimization of aircraft wings. Structural and Multidisciplinary Optimization, 2016, 53, 589-603.	1.7	9
143	Aerostructural design optimization of a continuous morphing trailing edge aircraft for improved mission performance. , 2016, , .		18
144	Multidisciplinary design optimization of large wind turbinesâ€"Technical, economic, and design challenges. Energy Conversion and Management, 2016, 123, 56-70.	4.4	63

#	Article	IF	Citations
145	Aerodynamic Shape Optimization of the CRM Configuration Including Buffet-Onset Conditions. , 2016, , .		10
146	Performance Evaluation of a Morphing Trailing Edge Using Multipoint Aerostructural Design Optimization. , 2016, , .		16
147	Thermodynamics For Gas Turbine Cycles With Analytic Derivatives in OpenMDAO. , 2016, , .		8
148	Allocation-mission-design optimization of next-generation aircraft using a parallel computational framework. , 2016, , .		21
149	Aerodynamic Shape Optimization of Common Research Model Wing–Body–Tail Configuration. Journal of Aircraft, 2016, 53, 276-293.	1.7	80
150	High-fidelity Aerostructural Optimization of a High Aspect Ratio Tow-steered Wing. , 2016, , .		16
151	A matrix-free augmented lagrangian algorithm with application to large-scale structural design optimization. Optimization and Engineering, 2016, 17, 359-384.	1.3	7
152	Aerodynamic Shape Optimization of a Truss-Braced-Wing Aircraft. , 2015, , .		10
153	High-Fidelity Aerostructural Otimization Considering Buffet Onset. , 2015, , .		16
154	High-Fidelity Hydrodynamic Shape Optimization of a 3-D Hydrofoil. Journal of Ship Research, 2015, 59, 209-226.	0.5	30
155	Surrogate models and mixtures of experts in aerodynamic performance prediction for aircraft mission analysis. Aerospace Science and Technology, 2015, 43, 126-151.	2.5	102
156	Aerodynamic Shape Optimization of an Adaptive Morphing Trailing-Edge Wing. Journal of Aircraft, 2015, 52, 1951-1970.	1.7	105
157	Multipoint Aerodynamic Shape Optimization Investigations of the Common Research Model Wing. , 2015, , .		11
158	Comparison of Inexact- and Quasi-Newton Algorithms for Aerodynamic Shape Optimization. , 2015, , .		4
159	Simultaneous aircraft allocation and mission optimization using a modular adjoint approach. , 2015, , .		12
160	A modular adjoint approach to aircraft mission analysis and optimization. , 2015, , .		15
161	Aerostructural Design Optimization of an Adaptive Morphing Trailing Edge Wing. , 2015, , .		17
162	Aerodynamic Shape Optimization of the Common Research Model Wing-Body-Tail Configuration. , 2015, , .		6

#	Article	IF	Citations
163	Aerodynamic Shape Optimization Investigations of the Common Research Model Wing Benchmark. AIAA Journal, 2015, 53, 968-985.	1.5	217
164	Multimission Aircraft Fuel-Burn Minimization via Multipoint Aerostructural Optimization. AIAA Journal, 2015, 53, 104-122.	1.5	123
165	Parallel allocation-mission optimization of a 128-route network. , 2015, , .		12
166	High-Fidelity Hydrodynamic Shape Optimization of a 3-D Hydrofoil. Journal of Ship Research, 2015, 59, 209-226.	0.5	26
167	Aerostructural optimization of the Common Research Model configuration. , 2014, , .		76
168	Multipoint High-Fidelity Aerostructural Optimization of a Transport Aircraft Configuration. Journal of Aircraft, 2014, 51, 144-160.	1.7	295
169	Aerodynamic Shape Optimization of an Adaptive Morphing Trailing Edge Wing. , 2014, , .		8
170	A parallel aerostructural optimization framework for aircraft design studies. Structural and Multidisciplinary Optimization, 2014, 50, 1079-1101.	1.7	77
171	RANS-based Aerodynamic Shape Optimization Investigations of the Common Research Model Wing. , 2014, , .		37
172	High Aspect Ratio Wing Design: Optimal Aerostructural Tradeoffs for the Next Generation of Materials. , 2014, , .		15
173	Surrogate Models and Mixtures of Experts in Aerodynamic Performance Prediction for Mission Analysis. , 2014, , .		8
174	Geometry and Structural Modeling for High-Fidelity Aircraft Conceptual Design Optimization. , 2014, , .		11
175	Multidisciplinary Design Optimization of an Aircraft Wing via a Matrix-Free Approach. , 2014, , .		4
176	Strategies for Solving High-Fidelity Aerodynamic Shape Optimization Problems. , 2014, , .		5
177	Concurrent aerostructural topology optimization of a wing box. Computers and Structures, 2014, 134, 1-17.	2.4	71
178	Scalable Parallel Approach for High-Fidelity Steady-State Aeroelastic Analysis and Adjoint Derivative Computations. AIAA Journal, 2014, 52, 935-951.	1.5	235
179	Design of a lithium-ion battery pack for PHEV using a hybrid optimization method. Applied Energy, 2014, 115, 591-602.	5.1	71
180	Aerodynamic Design Optimization Studies of a Blended-Wing-Body Aircraft. Journal of Aircraft, 2014, 51, 1604-1617.	1.7	182

#	Article	IF	Citations
181	Large-Scale Multidisciplinary Optimization of a Small Satellite's Design and Operation. Journal of Spacecraft and Rockets, 2014, 51, 1648-1663.	1.3	73
182	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
183	Computing Stability Derivatives and Their Gradients for Aerodynamic Shape Optimization. AIAA Journal, 2014, 52, 2533-2546.	1.5	25
184	Optimization of Flexible Flapping-Wing Kinematics in Hover. AIAA Journal, 2014, 52, 2342-2354.	1.5	14
185	Multidisciplinary design optimization of offshore wind turbines for minimum levelized cost of energy. Renewable Energy, 2014, 68, 893-905.	4.3	138
186	A parallel finite-element framework for large-scale gradient-based design optimization of high-performance structures. Finite Elements in Analysis and Design, 2014, 87, 56-73.	1.7	123
187	Towards Gradient-Based Design Optimization of Flexible Transport Aircraft with Flutter Constraints. , 2014, , .		13
188	Automatic Evaluation of Multidisciplinary Derivatives Using a Graph-Based Problem Formulation in OpenMDAO. , 2014, , .		50
189	A laminate parametrization technique for discrete ply-angle problems with manufacturing constraints. Structural and Multidisciplinary Optimization, 2013, 48, 379-393.	1.7	40
190	Optimization of LiMn2O4 electrode properties in a gradient- and surrogate-based framework. Acta Mechanica Sinica/Lixue Xuebao, 2013, 29, 335-347.	1.5	17
191	Multidisciplinary Design Optimization: A Survey of Architectures. AIAA Journal, 2013, 51, 2049-2075.	1.5	747
192	Stability-Constrained Aerodynamic Shape Optimization of Flying Wings. Journal of Aircraft, 2013, 50, 1431-1449.	1.7	77
193	Review and Unification of Methods for Computing Derivatives of Multidisciplinary Computational Models. AIAA Journal, 2013, 51, 2582-2599.	1.5	266
194	Simultaneous optimization of propeller–hull systems to minimize lifetime fuel consumption. Applied Ocean Research, 2013, 43, 46-52.	1.8	22
195	Automatic Differentiation Adjoint of the Reynolds-Averaged Navier-Stokes Equations with a Turbulence Model. , 2013, , .		78
196	RANS-based Aerodynamic Shape Optimization of a Blended-Wing-Body Aircraft. , 2013, , .		14
197	Aerodynamic Shape Optimization of a Blended-Wing-Body Aircraft. , 2013, , .		21
198	Aerostructural design optimization of a 100-passenger regional jet with surrogate-based mission analysis. , 2013, , .		21

#	Article	IF	Citations
199	Optimization of a Single Lithium-Ion Battery Cell with a Gradient-Based Algorithm. Journal of the Electrochemical Society, 2013, 160, A1071-A1078.	1.3	57
200	Energy Density Comparison of Li-ion Cathode Materials Using Dimensional Analysis. Journal of the Electrochemical Society, 2013, 160, A1187-A1193.	1.3	26
201	An Adjoint-based Derivative Evaluation Method for Time-dependent Aeroelastic Optimization of Flexible Aircraft. , 2013, , .		10
202	Large-Scale MDO of a Small Satellite using a Novel Framework for the Solution of Coupled Systems and their Derivatives. , 2013, , .		12
203	Optimization of the Kinematics of a Flapping Wing MAV in Hover for Enhanced Performance. , 2013, , .		5
204	A Comparison of Metallic and Composite Aircraft Wings Using Aerostructural Design Optimization. , 2012, , .		43
205	Graph Partitioning-Based Coordination Methods for Large-Scale Multidisciplinary Design Optimization Problems. , 2012, , .		7
206	Aircraft conceptual design for optimal environmental performance. Aeronautical Journal, 2012, 116, 1-22.	1.1	85
207	GeoMACH: Geometry-Centric MDAO of Aircraft Configurations with High Fidelity. , 2012, , .		26
208	Multi-point, multi-mission, high-fidelity aerostructural optimization of a long-range aircraft configuration. , 2012, , .		18
209	Stress-constrained topology optimization with design-dependent loading. Structural and Multidisciplinary Optimization, 2012, 46, 647-661.	1.7	96
210	Derivatives for Time-Spectral Computational Fluid Dynamics Using an Automatic Differentiation Adjoint. AIAA Journal, 2012, 50, 2809-2819.	1.5	68
211	Model-Predictive Gust Load Alleviation Controller for a Highly Flexible Aircraft. Journal of Guidance, Control, and Dynamics, 2012, 35, 1751-1766.	1.6	85
212	Aeroservoelastic Design Optimization of a Flexible Wing. Journal of Aircraft, 2012, 49, 432-443.	1.7	80
213	A Dynamic Parametrization Scheme for Shape Optimization Using Quasi-Newton Methods. , 2012, , .		1
214	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
215	Stress-based topology optimization using an isoparametric level set method. Finite Elements in Analysis and Design, 2012, 58, 20-30.	1.7	39
216	Structural topology optimization with design-dependent pressure loads. Computer Methods in Applied Mechanics and Engineering, 2012, 233-236, 40-48.	3.4	51

#	Article	IF	Citations
217	An isoparametric approach to level set topology optimization using a body-fitted finite-element mesh. Computers and Structures, 2012, 90-91, 97-106.	2.4	25
218	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
219	pyOpt: a Python-based object-oriented framework for nonlinear constrained optimization. Structural and Multidisciplinary Optimization, 2012, 45, 101-118.	1.7	353
220	Computation of Aircraft Stability Derivatives Using an Automatic Differentiation Adjoint Approach. AIAA Journal, 2011, 49, 2737-2750.	1.5	28
221	Adaptive accuracy trust region: using cross-validation in the optimization process. Engineering Optimization, 2011, 43, 615-633.	1.5	3
222	A Timoshenko beam theory with pressure corrections for layered orthotropic beams. International Journal of Solids and Structures, 2011, 48, 2373-2382.	1.3	28
223	Multidisciplinary Design Optimization for Complex Engineered Systems Design: State of the Research and State of the Practiceâ€"Report From a National Science Foundation Workshop. , 2011, , .		4
224	Mixed-Norm Multi-Objective Robust Controller Applied to a Very Flexible Aircraft. , 2011, , .		1
225	Multidisciplinary Design Optimization for Complex Engineered Systems: Report From a National Science Foundation Workshop. Journal of Mechanical Design, Transactions of the ASME, 2011, 133, .	1.7	111
226	A CAD-Free Approach to High-Fidelity Aerostructural Optimization. , 2010, , .		145
227	Benchmarking multidisciplinary design optimization algorithms. Optimization and Engineering, 2010, 11, 159-183.	1.3	106
228	Aerostructural Optimization of Nonplanar Lifting Surfaces. Journal of Aircraft, 2010, 47, 1490-1503.	1.7	84
229	Reducing Aviation's Environmental Impact Through Large Aircraft for Short Ranges. , 2010, , .		16
230	Application of Robust Control Design Techniques to the Aeroservoelastic Design Optimization of a Very Flexible UAV Wing. , 2010, , .		6
231	Parallel Solution Methods for Aerostructural Analysis and Design Optimization. , 2010, , .		38
232	A New Approach to Multidisciplinary Design Optimization via Internal Decomposition. , 2010, , .		1
233	Stability-Constrained Aerodynamic Shape Optimization of a Flying Wing Configuration. , 2010, , .		2
234	pyMDO. ACM Transactions on Mathematical Software, 2009, 36, 1-25.	1.6	23

#	Article	IF	Citations
235	An asymmetric suboptimization approach toÂaerostructural optimization. Optimization and Engineering, 2009, 10, 133-152.	1.3	49
236	Structural topology optimization for multiple load cases using a dynamic aggregation technique. Engineering Optimization, 2009, 41, 1103-1118.	1.5	39
237	Application of Model Predictive Control to Gust Loads Alleviation Systems. , 2009, , .		7
238	Aero-structural optimization using adjoint coupled post-optimality sensitivities. Structural and Multidisciplinary Optimization, 2008, 36, 59-70.	1.7	18
239	ADjoint: An Approach for the Rapid Development of Discrete Adjoint Solvers. AIAA Journal, 2008, 46, 863-873.	1.5	167
240	Aerostructural Optimization of Aircraft Structures Using Asymmetric Subspace Optimization. , 2008, , .		7
241	pyACDT: An Object-Oriented Framework for Aircraft Design Modelling and Multidisciplinary Optimization. , 2008, , .		22
242	Reconfigurable Semi-Analytic Sensitivity Methods and MDO Architectures within the piMDO Framework. , 2008, , .		4
243	Aero-Structural Optimization of Non-Planar Lifting Surface Configurations. , 2008, , .		6
244	Toward High-Fidelity Aerostructural Optimization Using a Coupled ADjoint Approach. , 2008, , .		2
245	Aerostructural Shape Optimization of Wind Turbine Blades Considering Site-Specific Winds. , 2008, , .		39
246	A Configurable B-Spline Parametrization Method for Structural Optimization of Wing Boxes. , 2008, , .		1
247	Modeling and simulation of flexible UAVs with large aspect ratio. , 2008, , .		0
248	A framework for high-fidelity aerostructural optimization of aircraft configurations. , 2008, , .		0
249	Variable-complexity optimization applied to airfoil design. Engineering Optimization, 2007, 39, 271-286.	1.5	16
250	A New Subspace Optimization Method for Aero-Structural Design. , 2007, , .		1
251	An Object-Oriented Framework for Multidisciplinary Design Optimization. , 2007, , .		16
252	Towards Aircraft Design Using an Automatic Discrete Adjoint Solver. , 2007, , .		2

#	Article	IF	Citations
253	A methodology for the development of discrete adjoint solvers using automatic differentiation tools. International Journal of Computational Fluid Dynamics, 2007, 21, 307-327.	0.5	34
254	An adaptive approach to constraint aggregation using adjoint sensitivity analysis. Structural and Multidisciplinary Optimization, 2007, 34, 61-73.	1.7	162
255	On the Common Structure of MDO Problems: A Comparison of Architectures. , 2006, , .		28
256	ADjoint: An Approach for Rapid Development of Discrete Adjoint Solvers. , 2006, , .		2
257	A Coupled-Adjoint Sensitivity Analysis Method for High-Fidelity Aero-Structural Design. Optimization and Engineering, 2005, 6, 33-62.	1.3	208
258	High-Fidelity Aerostructural Design Optimization of a Supersonic Business Jet. Journal of Aircraft, 2004, 41, 523-530.	1.7	211
259	pyMDO: A Framework for High-Fidelity Multi-Disciplinary Optimization. , 2004, , .		28
260	High-Fidelity Aero-Structural Design Using a Parametric CAD-Based Model. , 2003, , .		37
261	The complex-step derivative approximation. ACM Transactions on Mathematical Software, 2003, 29, 245-262.	1.6	575
262	High-Fidelity Aero-Structural Design Optimization of a Supersonic Business Jet. , 2002, , .		40
263	Complete Configuration Aero-Structural Optimization Using a Coupled Sensitivity Analysis Method. , 2002, , .		31
264	An automated method for sensitivity analysis using complex variables. , 2000, , .		93
265	A coupled aero-structural optimization method for complete aircraft configurations. , 1999, , .		43
266	Conceptual Design and Optimization of Environmentally-Friendly Aircraft. , 0, , .		0