

Rafael Palacios

List of Publications by Year in descending order

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164
papers

2,837
citations

201658

27
h-index

214788

47
g-index

164
all docs

164
docs citations

164
times ranked

1256
citing authors

#	ARTICLE	IF	CITATIONS
1	Modal-Based Nonlinear Model Predictive Control for 3-D Very Flexible Structures. IEEE Transactions on Automatic Control, 2022, 67, 2145-2160.	5.7	4
2	Some modelling improvements for prediction of wind turbine rotor loads in turbulent wind. Wind Energy, 2022, 25, 333-353.	4.2	4
3	Nonlinear Aeroelastic Analysis of High-Aspect-Ratio Wings with a Low-Order Propeller Model. Journal of Aircraft, 2022, 59, 293-306.	2.4	12
4	Pitfalls of Discrete Adjoint Fixed-Points Based on Algorithmic Differentiation. AIAA Journal, 2022, 60, 1251-1256.	2.6	2
5	Discrete adjoint methodology for general multiphysics problems. Structural and Multidisciplinary Optimization, 2022, 65, 1.	3.5	5
6	A Flutter Prediction Framework in the Open-Source SU2 Suite. , 2022, , .		4
7	Nonlinear optimal control for gust load alleviation with a physics-constrained data-driven internal model. , 2022, , .		3
8	Parametric Reduced Order Models for the Aeroelastic Design of Flexible Vehicles. , 2022, , .		1
9	Modelling and Numerical Enhancements on a UVLM for Nonlinear Aeroelastic Simulation. , 2022, , .		5
10	Fast flutter evaluation of very flexible wing using interpolation on an optimal training dataset. , 2022, , .		3
11	Flutter Predictions for Very Flexible Wing Wind Tunnel Test. Journal of Aircraft, 2022, 59, 1082-1097.	2.4	16
12	Evaluation of Local Security Event Management System vs. Standard Antivirus Software. Applied Sciences (Switzerland), 2022, 12, 1076.	2.5	3
13	Strain-Based Geometrically Nonlinear Beam Formulation for Multibody Dynamic Analysis. , 2022, , .		0
14	HTB: A Very Effective Method to Protect Web Servers Against BREACH Attack to HTTPS. IEEE Access, 2022, 10, 40381-40390.	4.2	1
15	Aerostructural topology optimization using high fidelity modeling. Structural and Multidisciplinary Optimization, 2022, 65, 1.	3.5	9
16	Strain-Based Geometrically Nonlinear Beam Formulation for Rigid-Flexible Multibody Dynamic Analysis. AIAA Journal, 2022, 60, 4954-4968.	2.6	11
17	Multi-fidelity Nonlinear Aeroelastic Analysis of a Strut-braced Ultra-high Aspect Ratio Wing Configuration. , 2022, , .		0
18	A Rising Role for Decentralized Solar Minigrids in Integrated Rural Electrification Planning? Large-Scale, Least-Cost, and Customer-Wise Design of Grid and Off-Grid Supply Systems in Uganda. Energies, 2022, 15, 4517.	3.1	7

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19	Generalized Kelvin-Voigt Damping for Geometrically Nonlinear Beams. <i>AIAA Journal</i> , 2021, 59, 356-365.	2.6	4
20	A Non-Intrusive Nonlinear Aeroelastic Extension of Loads Packages with Application to Long Range Transport Aircraft Configuration. , 2021, , .		0
21	Flutter predictions for very flexible wing wind tunnel test. , 2021, , .		10
22	Proof of Concept for a Hardware-in-the-Loop Nonlinear Control Framework for Very Flexible Aircraft. , 2021, , .		3
23	Parametric Krylov-based order reduction of aircraft aeroelastic models. , 2021, , .		4
24	Sustainable High-Performance Optimizations in SU2. , 2021, , .		11
25	Thick Strip Method for Efficient Large-Eddy Simulations of Flexible Wings in Stall. , 2021, , .		0
26	Nonlinear Static and Dynamic Analysis Framework for Very Flexible Multibody Aircraft with Propellers. , 2021, , .		1
27	A non-intrusive geometrically nonlinear augmentation to generic linear aeroelastic models. <i>Journal of Fluids and Structures</i> , 2021, 101, 103222.	3.4	6
28	Teleneurology-Enabled Determination of Death by Neurologic Criteria After Cardiac Arrest or Severe Neurologic Injury. <i>Neurology</i> , 2021, 96, e1999-e2005.	1.1	7
29	Aeroelastic Control and Estimation with a Minimal Nonlinear Modal Description. <i>AIAA Journal</i> , 2021, 59, 2697-2713.	2.6	15
30	Analysis of Harassment Complaints to Detect Witness Intervention by Machine Learning and Soft Computing Techniques. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 8007.	2.5	0
31	Unsteady Aeroelasticity of Slender Wings with Leading-Edge Separation. , 2021, , .		2
32	Optimisation of Region of Attraction Estimates for the Exponential Stabilisation of the Intrinsic Geometrically Exact Beam Model. , 2021, , .		0
33	Teleneurology Consultations for Prognostication and Brain Death Diagnosis. <i>Telemedicine Journal and E-Health</i> , 2020, 26, 482-486.	2.8	6
34	Benchmarking different fidelities in wind turbine aerodynamics under yaw. <i>Journal of Physics: Conference Series</i> , 2020, 1618, 042017.	0.4	0
35	Code-to-code-to-experiment validation of LES-ALM wind farm simulators. <i>Journal of Physics: Conference Series</i> , 2020, 1618, 062041.	0.4	2
36	Modal-Based Nonlinear Estimation and Control for Highly Flexible Aeroelastic Systems. , 2020, , .		0

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37	Simulation and Optimization of Takeoff Maneuvers of Very Flexible Aircraft. Journal of Aircraft, 2020, 57, 1097-1110.	2.4	10
38	Realistic Turbulence Effects in Low Altitude Dynamics of Very Flexible Aircraft. , 2020, , .		4
39	Non-Intrusive Load Monitoring (NILM) for Energy Disaggregation Using Soft Computing Techniques. Energies, 2020, 13, 3117.	3.1	22
40	Aerodynamic-driven topology optimization of compliant airfoils. Structural and Multidisciplinary Optimization, 2020, 62, 2117-2130.	3.5	15
41	Parametric Reduced-Order Modeling of the Unsteady Vortex-Lattice Method. AIAA Journal, 2020, 58, 2206-2220.	2.6	14
42	Unsteady and three-dimensional aerodynamic effects on wind turbine rotor loads. , 2020, , .		1
43	Aerodynamic Driven Multidisciplinary Topology Optimization of Compliant Airfoils. , 2020, , .		2
44	WInc3D: A novel framework for turbulence-resolving simulations of wind farm wake interactions. Wind Energy, 2020, 23, 779-794.	4.2	23
45	A Discrete Adjoint Solver for Time-Domain Fluid-Structure Interaction Problems with Large Deformations. , 2020, , .		1
46	Assessment of low-altitude atmospheric turbulence models for aircraft aeroelasticity. Journal of Fluids and Structures, 2020, 95, 102981.	3.4	17
47	Effects of Leading-Edge Tubercles on Structural Dynamics and Aeroelasticity. , 2020, , 147-173.		1
48	Modal-based Model Predictive Control of Multibody Very Flexible Structures. IFAC-PapersOnLine, 2020, 53, 7472-7478.	0.9	0
49	Invariant Manifolds in Beam Dynamics: Free Vibrations and Nonlinear Normal Modes. , 2020, , 1345-1352.		0
50	A Nonlinear Modal-Based Framework for Low Computational Cost Optimal Control of 3D Very Flexible Structures. , 2019, , .		4
51	Optimal Electrification Planning Incorporating On- and Off-Grid Technologies: The Reference Electrification Model (REM). Proceedings of the IEEE, 2019, 107, 1872-1905.	21.3	36
52	Nonlinear Modal Aeroelastic Analysis from Large Industrial-Scale Models. , 2019, , .		4
53	State-Space Realizations and Internal Balancing in Potential-Flow Aerodynamics with Arbitrary Kinematics. AIAA Journal, 2019, 57, 2308-2321.	2.6	20
54	Numerical prediction of vortex-induced vibration of flexible riser with thick strip method. Journal of Fluids and Structures, 2019, 89, 166-173.	3.4	24

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55	Detection of Jihadism in Social Networks Using Big Data Techniques Supported by Graphs and Fuzzy Clustering. Complexity, 2019, 2019, 1-13.	1.6	7
56	Nonlinear Modal Condensation of Large Finite Element Models: Application of Hodges's Intrinsic Theory. AIAA Journal, 2019, 57, 4255-4268.	2.6	8
57	Efficient Time-Domain Simulations in Nonlinear Aeroelasticity. , 2019, , .		7
58	Autonomous Landing Control of Highly Flexible Aircraft Based on Lidar Preview in the Presence of Wind Turbulence. IEEE Transactions on Aerospace and Electronic Systems, 2019, 55, 2543-2555.	4.7	18
59	Optimal Compliant Airfoils Using Fully Non-Linear FSI Models. , 2019, , .		4
60	Impact of Telemedicine in Pediatric Postoperative Care. Telemedicine Journal and E-Health, 2019, 25, 1083-1089.	2.8	29
61	SHARPy: A dynamic aeroelastic simulation toolbox for very flexible aircraft and wind turbines. Journal of Open Source Software, 2019, 4, 1885.	4.6	59
62	Nonlinear Aeroelastic Control of Very Flexible Aircraft Using Model Updating. Journal of Aircraft, 2018, 55, 1551-1563.	2.4	27
63	Bat-inspired integrally actuated membrane wings with leading-edge sensing. Bioinspiration and Biomimetics, 2018, 13, 016013.	2.9	9
64	Invariant Manifolds in Beam Dynamics: Free Vibrations and Nonlinear Normal Modes. , 2018, , 1-8.		0
65	Coupled adjoint-based sensitivities in large displacement fluid-structure interaction using algorithmic differentiation. International Journal for Numerical Methods in Engineering, 2018, 113, 1081-1107.	2.8	31
66	Aeroservoelastic Optimisation of Aerofoils with Compliant Flaps via Reparameterization and Variable Selection. AIAA Journal, 2018, 56, 1146-1157.	2.6	5
67	State space realisation and model reduction of potential-flow aerodynamics for HAWT applications. Journal of Physics: Conference Series, 2018, 1037, 022033.	0.4	0
68	Preview-Based Altitude Control for a Very Flexible Flying Wing with Lidar Wind Measurements. , 2018, , .		0
69	Aeroelastic and Trajectory Control of High Altitude Long Endurance Aircraft. IEEE Transactions on Aerospace and Electronic Systems, 2018, 54, 2992-3003.	4.7	20
70	Automatic Landing Control of a Very Flexible Flying Wing. , 2018, , .		0
71	Model-based aeroelastic analysis and blade load alleviation of offshore wind turbines. International Journal of Control, 2017, 90, 15-36.	1.9	10
72	Geometrically-nonlinear effects in lateral manoeuvres with coupled flight dynamics and aeroelasticity. , 2017, , .		0

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73	State-space realizations of potential-flow unsteady aerodynamics with arbitrary kinematics. , 2017, , .		1
74	Aeroservoelastic Optimisation of an Aerofoil with Active Compliant Flap via Reparametrisation and Variable Selection. , 2017, , .		1
75	Bio-inspired Leading-Edge Tubercles to Improve Fatigue Life in Horizontal Axis Wind Turbine Blades. , 2017, , .		11
76	Optimal Actuation of Dielectric Membrane Wings using High-Fidelity Fluid-Structure Modelling. , 2017, , .		3
77	On-Demand Aerodynamics in Integrally Actuated Membranes with Feedback Control. AIAA Journal, 2017, 55, 377-388.	2.6	8
78	Optimal Rolling Maneuvers with Very Flexible Wings. AIAA Journal, 2017, 55, 2964-2979.	2.6	6
79	Trajectory control of a very flexible flying wing. , 2017, , .		3
80	Generalized thick strip modelling for vortex-induced vibration of long flexible cylinders. Journal of Computational Physics, 2016, 321, 1079-1097.	3.8	37
81	Aeroservoelastic Optimisation of an Aerofoil with Active Compliant Flap via Reparametrisation and Variable Selection. , 2016, , .		1
82	Optimal vibration control and co-design of very flexible actuated structures. Journal of Sound and Vibration, 2016, 377, 1-21.	3.9	16
83	Effects of leading-edge tubercles on wing flutter speeds. Bioinspiration and Biomimetics, 2016, 11, 036003.	2.9	6
84	Nonlinear Modal Aeroservoelastic Analysis Framework for Flexible Aircraft. AIAA Journal, 2016, 54, 3075-3090.	2.6	43
85	Aerodynamic load control in horizontal axis wind turbines with combined aeroelastic tailoring and trailing-edge flaps. Wind Energy, 2016, 19, 243-263.	4.2	40
86	Model-Predictive Control of Flexible Aircraft Dynamics using Nonlinear Reduced-Order Models. , 2016, , .		6
87	Optimal manoeuvres with very flexible wings. , 2016, , .		3
88	Dynamic Load Alleviation in Wake Vortex Encounters. Journal of Guidance, Control, and Dynamics, 2016, 39, 801-813.	2.8	21
89	Viscoelastic effects in the aeromechanics of actuated elastomeric membrane wings. Journal of Fluids and Structures, 2016, 63, 40-56.	3.4	13
90	Anomaly detection via a Gaussian Mixture Model for flight operation and safety monitoring. Transportation Research Part C: Emerging Technologies, 2016, 64, 45-57.	7.6	158

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91	Towards a Fluid-Structure Interaction Solver for Problems with Large Deformations Within the Open-Source SU2 Suite. , 2016, , .		18
92	Feedback control of integrally actuated membrane wings: a computational study. , 2016, , .		0
93	High-fidelity simulation and reduced-order modelling of integrally-actuated membrane wings with feedback control. , 2016, , .		0
94	Unsteady Aerodynamics of a 3D Wing Hosting Synthetic Jet Actuators. , 2015, , .		0
95	Nonlinear Aeroservoelastic Analysis of Flexible Aircraft Described by Large Finite-Element Models. , 2015, , .		1
96	A method for normal-mode-based model reduction in nonlinear dynamics of slender structures. Computers and Structures, 2015, 159, 26-40.	4.4	28
97	Analysis of Flight Data Using Clustering Techniques for Detecting Abnormal Operations. Journal of Aerospace Information Systems, 2015, 12, 587-598.	1.4	119
98	Integrated Flight Dynamics and Aeroelasticity of Flexible Aircraft with Application to Swept Flying Wings. , 2015, , .		3
99	Electro-aeromechanical modelling and feedback control of actuated membrane wings. , 2015, , .		0
100	Electro-aeromechanical modelling of actuated membrane wings. Journal of Fluids and Structures, 2015, 58, 188-202.	3.4	18
101	Model Order Reduction for Control Design of Flexible Free-Flying Aircraft. , 2015, , .		10
102	Aeroservoelastic state-space vortex lattice modeling and load alleviation of wind turbine blades. Wind Energy, 2015, 18, 1317-1331.	4.2	27
103	Nonlinear Model Reduction for Aeroelastic Control of Flexible Aircraft Described by Large Finite-Element Models. , 2014, , .		5
104	Predictive Control for Alleviation of Gust Loads on Very Flexible Aircraft. , 2014, , .		10
105	Consistent Structural Linearization in Flexible Aircraft Dynamics with Large Rigid-Body Motion. AIAA Journal, 2014, 52, 528-538.	2.6	33
106	Efficient aeroservoelastic modeling and control using trailing-edge flaps of wind turbines. , 2014, , .		8
107	Reexamined Structural Design Procedures for Very Flexible Aircraft. Journal of Aircraft, 2014, 51, 1580-1591.	2.4	80
108	T-tail flutter: Potential-flow modelling, experimental validation and flight tests. Progress in Aerospace Sciences, 2014, 71, 54-84.	12.1	18

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109	Reduced-Order Aeroelastic Models for Dynamics of Maneuvering Flexible Aircraft. AIAA Journal, 2014, 52, 1717-1732.	2.6	62
110	Model-based Aeroservoelastic Design and Load Alleviation of Large Wind Turbines. , 2014, , .		5
111	Optimal control for load alleviation in wind turbines. , 2014, , .		5
112	An energy-preserving description of nonlinear beam vibrations in modal coordinates. Journal of Sound and Vibration, 2013, 332, 5543-5558.	3.9	16
113	Induced-Drag Calculations in the Unsteady Vortex Lattice Method. AIAA Journal, 2013, 51, 1775-1779.	2.6	75
114	Leading- and trailing-edge effects on the aeromechanics of membrane aerofoils. Journal of Fluids and Structures, 2013, 38, 107-126.	3.4	53
115	Homogenisation of slender periodic composite structures. International Journal of Solids and Structures, 2013, 50, 1473-1481.	2.7	14
116	Robust Gust Alleviation and Stabilization of Very Flexible Aircraft. AIAA Journal, 2013, 51, 330-340.	2.6	92
117	Robust Aeroelastic Control of Very Flexible Wings using Intrinsic Models. , 2013, , .		4
118	Short-term consequences of radio communications blackout on the U.S. National Airspace System. Aerospace Science and Technology, 2013, 29, 426-433.	4.8	1
119	Fluid-Structure Interaction Simulation of the Inflated Shape of Ram-Air Parachutes. , 2013, , .		15
120	Numerical aspects of nonlinear flexible aircraft flight dynamics modeling. , 2013, , .		16
121	Model Reduction in Flexible-Aircraft Dynamics with Large Rigid-Body Motion. , 2013, , .		1
122	Filtering Enhanced Traffic Management System (ETMS) Altitude Data. Metrology and Measurement Systems, 2013, 20, 453-464.	1.4	9
123	Homogenization of slender periodic composite structures. , 2012, , .		0
124	Consistent Structural Linearization in Flexible Aircraft Dynamics with Large Rigid-Body Motion. , 2012, , .		1
125	Intrinsic models for nonlinear flexible-aircraft dynamics using industrial finite-element and loads packages. , 2012, , .		5
126	Nonlinear Model Reduction for Flexible Aircraft Control Design. , 2012, , .		27

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127	Assessment of Wake-Tail Interference Effects on the Dynamics of Flexible Aircraft. AIAA Journal, 2012, 50, 1575-1585.	2.6	56
128	Consistent structural linearisation in flexible-body dynamics with large rigid-body motion. Computers and Structures, 2012, 110-111, 1-14.	4.4	37
129	Applications of the unsteady vortex-lattice method in aircraft aeroelasticity and flight dynamics. Progress in Aerospace Sciences, 2012, 55, 46-72.	12.1	218
130	Open-Loop Stability and Closed-Loop Gust Alleviation on Flexible Aircraft Including Wake Modeling. , 2012, , .		13
131	Anomaly detection in onboard-recorded flight data using cluster analysis. , 2011, , .		32
132	Stability and Open-Loop Dynamics of Very Flexible Aircraft Including Free-Wake Effects. , 2011, , .		9
133	An Intrinsic Description of the Nonlinear Aeroelasticity of Very Flexible Wings. , 2011, , .		15
134	Nonlinear normal modes in an intrinsic theory of anisotropic beams. Journal of Sound and Vibration, 2011, 330, 1772-1792.	3.9	47
135	Speed estimation of vehicles approaching an intersection: a digital image processing method. Imaging Science Journal, 2011, 59, 293-302.	0.5	2
136	Camber effects in the dynamic aeroelasticity of compliant airfoils. Journal of Fluids and Structures, 2010, 26, 527-543.	3.4	33
137	Modeling of Nonlinear Flexible Aircraft Dynamics Including Free-Wake Effects. , 2010, , .		8
138	Structural and Aerodynamic Models in Nonlinear Flight Dynamics of Very Flexible Aircraft. AIAA Journal, 2010, 48, 2648-2659.	2.6	151
139	Aircraft-Based Complexity Assessment for Radar Controllers in the Multi-Sector Planner Experiment. , 2010, , .		0
140	Assisting tools for a new maintenance planning in a power distribution system. , 2010, , .		1
141	Neural network models to detect airplane near-collision situations. Transportation Planning and Technology, 2010, 33, 237-255.	2.0	6
142	Component Stress Evaluation in an Electrical Power Distribution System Using Neural Networks. Lecture Notes in Computer Science, 2010, , 21-30.	1.3	1
143	Analysis of stochastic problem decomposition algorithms in computational grids. Annals of Operations Research, 2009, 166, 355-373.	4.1	11
144	Analytical procedure to obtain internal parameters from performance curves of commercial thermoelectric modules. Applied Thermal Engineering, 2009, 29, 3501-3505.	6.0	35

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145	A moderate deflection composite helicopter rotor blade model with an improved cross-sectional analysis. <i>International Journal of Solids and Structures</i> , 2009, 46, 2186-2200.	2.7	42
146	Structural Models for Flight Dynamic Analysis of Very Flexible Aircraft. , 2009, , .		11
147	Computational Aeroelasticity Framework for Analyzing Flapping Wing Micro Air Vehicles. <i>AIAA Journal</i> , 2009, 47, 1865-1878.	2.6	103
148	A system for processing handwritten bank checks automatically. <i>Image and Vision Computing</i> , 2008, 26, 1297-1313.	4.5	36
149	On the one-dimensional modeling of camber bending deformations in active anisotropic slender structures. <i>International Journal of Solids and Structures</i> , 2008, 45, 2097-2116.	2.7	8
150	Low-Speed Aeroelastic Modeling of Very Flexible Slender Wings with Deformable Airfoils. , 2008, , .		10
151	Geometrically Nonlinear Theory of Composite Beams with Deformable Cross Sections. <i>AIAA Journal</i> , 2008, 46, 439-450.	2.6	27
152	Computational Aeroelasticity Framework for Analyzing Flapping Wing Micro Air Vehicles. , 2008, , .		7
153	Computational Fluid-Structure Interaction of a Deformable Flapping Wing for Micro Air Vehicle Applications. , 2008, , .		20
154	Computing Aircraft Position Prediction~!2008-08-05~!2008-10-18~!2008-11-28~!. <i>Open Transportation Journal</i> , 2008, 2, 94-97.	0.6	2
155	A Ritz Approximation to the Deformation of Anisotropic Slender Structures with Finite-Size Cross Sections. , 2007, , .		0
156	Cross-Sectional Analysis of Nonhomogeneous Anisotropic Active Slender Structures. <i>AIAA Journal</i> , 2005, 43, 2624-2638.	2.6	92
157	HANDWRITTEN BANK CHECK RECOGNITION OF COURTESY AMOUNTS. <i>International Journal of Image and Graphics</i> , 2004, 04, 203-222.	1.5	20
158	Training neural networks for reading handwritten amounts on checks. , 2003, , .		3
159	Feedback-based architecture for reading courtesy amounts on checks. <i>Journal of Electronic Imaging</i> , 2003, 12, 194.	0.9	12
160	Effective cross-section distribution of anisotropic piezocomposite actuators for wing twist. , 2003, 5056, 21.		6
161	Remote automatic doorman via the internet. <i>Communications of the ACM</i> , 2002, 45, 23-25.	4.5	0
162	Experiences learned from the on-line internal monitoring of the behaviour of a transformer. , 0, , .		6

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163	Test bench for measuring the electrical properties of commercial thermoelectric modules. , 0, , .		3
164	Aeroelastic Simulation of High-Aspect Ratio Wings with Intermittent Leading-Edge Separation. AIAA Journal, 0, , 1-14.	2.6	5