

Cornel Sultan

List of Publications by Year in descending order

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90
papers

1,589
citations

361413

20
h-index

345221

36
g-index

90
all docs

90
docs citations

90
times ranked

703
citing authors

#	ARTICLE	IF	CITATIONS
1	Deployment of tensegrity structures. International Journal of Solids and Structures, 2003, 40, 4637-4657.	2.7	149
2	A Computational Tensegrity Model Predicts Dynamic Rheological Behaviors in Living Cells. Annals of Biomedical Engineering, 2004, 32, 520-530.	2.5	103
3	Tensegrity Flight Simulator. Journal of Guidance, Control, and Dynamics, 2000, 23, 1055-1064.	2.8	91
4	The prestressability problem of tensegrity structures: some analytical solutions. International Journal of Solids and Structures, 2001, 38, 5223-5252.	2.7	88
5	Chapter 2 Tensegrity. Advances in Applied Mechanics, 2009, 43, 69-145.	2.3	84
6	Linear dynamics of tensegrity structures. Engineering Structures, 2002, 24, 671-685.	5.3	73
7	Sensing Wind from Quadrotor Motion. Journal of Guidance, Control, and Dynamics, 2019, 42, 836-852.	2.8	49
8	Symmetrical reconfiguration of tensegrity structures. International Journal of Solids and Structures, 2002, 39, 2215-2234.	2.7	48
9	Modeling and control of a helicopter slung-load system. Aerospace Science and Technology, 2013, 29, 206-222.	4.8	47
10	<title>Controllable tensegrity: a new class of smart structures</title>. , 1997, 3039, 166.		43
11	Tensegrity deployment using infinitesimal mechanisms. International Journal of Solids and Structures, 2014, 51, 3653-3668.	2.7	41
12	Stiffness formulations and necessary and sufficient conditions for exponential stability of prestressable structures. International Journal of Solids and Structures, 2013, 50, 2180-2195.	2.7	40
13	A force and torque tensegrity sensor. Sensors and Actuators A: Physical, 2004, 112, 220-231.	4.1	39
14	Constrained predictive control of helicopters. Aircraft Engineering and Aerospace Technology, 2013, 85, 32-47.	0.8	31
15	Model Predictive Control for Helicopter Shipboard Operations in the Ship Airwakes. Journal of Guidance, Control, and Dynamics, 2016, 39, 574-589.	2.8	29
16	Deep Space Formation Flying Spacecraft Path Planning. International Journal of Robotics Research, 2007, 26, 405-430.	8.5	28
17	Modeling of tensegrity-membrane systems. International Journal of Solids and Structures, 2016, 82, 125-143.	2.7	28
18	Simultaneous Helicopter and Control-System Design. Journal of Aircraft, 2013, 50, 911-925.	2.4	26

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19	Deployment of foldable tensegrity-membrane systems via transition between tensegrity configurations and tensegrity-membrane configurations. <i>International Journal of Solids and Structures</i> , 2019, 160, 103-119.	2.7	25
20	Shrinking Horizon Model Predictive Control Method for Helicopter Ship Touchdown. <i>Journal of Guidance, Control, and Dynamics</i> , 2020, 43, 884-900.	2.8	25
21	Tendon control deployment of tensegrity structures. , 1998, , .		24
22	An assessment of using variable blade pitch for moored ocean current turbine flight control. <i>International Journal of Marine Energy</i> , 2016, 13, 16-26.	1.8	22
23	Peak-to-peak control of an adaptive tensegrity space telescope. , 1999, 3667, 190.		20
24	Proportional damping approximation using the energy gain and simultaneous perturbation stochastic approximation. <i>Mechanical Systems and Signal Processing</i> , 2010, 24, 2210-2224.	8.0	20
25	Comfortable helicopter flight via passive/active morphing. <i>IEEE Transactions on Aerospace and Electronic Systems</i> , 2015, 51, 2876-2886.	4.7	20
26	Optimal Energy Harvesting from a Membrane Attached to a Tensegrity Structure. <i>AIAA Journal</i> , 2014, 52, 307-319.	2.6	18
27	Infinite horizon model predictive control tracking application to helicopters. <i>Aerospace Science and Technology</i> , 2020, 98, 105675.	4.8	18
28	Measuring Atmospheric Winds from Quadrotor Motion. , 2017, , .		16
29	Designing structures for dynamical properties via natural frequencies separation. <i>Mechanical Systems and Signal Processing</i> , 2009, 23, 1112-1122.	8.0	15
30	Flight Control Energy Saving via Helicopter Rotor Active Morphing. <i>Journal of Aircraft</i> , 2014, 51, 1784-1804.	2.4	15
31	Tensegrity Structures Prestressability Investigation. <i>International Journal of Space Structures</i> , 2003, 18, 15-30.	1.0	14
32	Decoupling approximation design using the peak to peak gain. <i>Mechanical Systems and Signal Processing</i> , 2013, 36, 582-603.	8.0	14
33	LPV control of a tensegrity-membrane system. <i>Mechanical Systems and Signal Processing</i> , 2017, 95, 397-424.	8.0	14
34	Aeroelastic Control-Oriented Modeling of an Airbreathing Hypersonic Vehicle. <i>Journal of Guidance, Control, and Dynamics</i> , 2018, 41, 1136-1149.	2.8	13
35	Variance-constrained control of maneuvering helicopters with sensor failure. <i>Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering</i> , 2013, 227, 1845-1858.	1.3	12
36	System Analysis and Control Design for a Membrane with Bimorph Actuators. <i>AIAA Journal</i> , 2015, 53, 2110-2120.	2.6	12

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37	Control-oriented modeling and deployment of tensegrity membrane systems. International Journal of Robust and Nonlinear Control, 2017, 27, 2722-2748.	3.7	12
38	Modeling and Numerical Simulation of a Buoyancy Controlled Ocean Current Turbine. International Marine Energy Journal, 2021, 4, 47-58.	0.8	12
39	Energy Suboptimal Collision-Free Path Reconfiguration for Spacecraft Formation Flying. Journal of Guidance, Control, and Dynamics, 2006, 29, 190-192.	2.8	10
40	In-Stream Hydrokinetic Turbine Fault Detection and Fault Tolerant Control - A Benchmark Model. , 2019, , .		10
41	<title>Force and torque smart tensegrity sensor</title>. , 1998, , .		9
42	Solution of Nonlinear Vibration Problem of a Prestressed Membrane by Adomian Decomposition. AIAA Journal, 2012, 50, 1796-1800.	2.6	9
43	Nonlinear Helicopter and Ship Models for Predictive Control of Ship Landing Operations. , 2014, , .		9
44	Tensegrity motion control using internal mechanisms. , 2009, , .		8
45	Graceful Passage Through Hopf Bifurcation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 10899-10903.	0.4	8
46	A comparative study on the dynamics of tensegrity-membrane systems based on multiple models. International Journal of Solids and Structures, 2017, 113-114, 47-69.	2.7	8
47	Variable Horizon Model Predictive Control for Helicopter Landing on Moving Decks. Journal of Guidance, Control, and Dynamics, 2022, 45, 774-780.	2.8	8
48	Integrated Maneuvering Helicopter Model and Controller Design. , 2012, , .		7
49	Towards Flying Qualities Constraints in the Multidisciplinary Design Optimization of a Supersonic Tailless Aircraft. , 2012, , .		7
50	Constrained Control of Moored Ocean Current Turbines With Cyclic Blade Pitch Variations. IEEE Journal of Oceanic Engineering, 2021, 46, 594-610.	3.8	7
51	Nonlinear systems control using equilibrium paths. , 2007, , .		6
52	Model Predictive Control of Maneuvering Helicopters. , 2012, , .		6
53	Accurate Computing of Higher Vibration Modes of Thin Flexible Structures. AIAA Journal, 2016, 54, 1704-1718.	2.6	6
54	Model predictive control for moored ocean current turbines. , 2017, , .		6

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55	Numerical simulation and dynamical response of a moored hydrokinetic turbine operating in the wake of an upstream turbine for control design. <i>Renewable Energy</i> , 2017, 114, 1134-1145.	8.9	6
56	Close tracking of equilibrium paths. <i>International Journal of Robust and Nonlinear Control</i> , 2018, 28, 2209-2230.	3.7	6
57	Modern Control Design for A Membrane with Bimorph Actuators. , 2013, , .		5
58	LQG Control and Robustness Study for a Prestressed Membrane With Bimorph Actuators. , 2014, , .		5
59	Comparison of Deep Reinforcement Learning and Model Predictive Control for Real-Time Depth Optimization of a Lifting Surface Controlled Ocean Current Turbine. , 2021, , .		5
60	Applications of Calculus of Variations to Aircraft and Spacecraft Path Planning. , 2009, , .		4
61	Robustness of variance constrained controllers for complex, control oriented helicopter models. , 2013, , .		4
62	LMI Control Design With Input Covariance Constraint for a Tensegrity Simplex Structure. , 2014, , .		4
63	LQR Using Second Order Vector Form for a Membrane with Bimorph Actuators. , 2015, , .		4
64	Variance Constrained cyclic blade control of moored ocean current turbines. , 2016, , .		4
65	Aeroelastic Control-oriented Modeling of an Air-breathing Hypersonic Vehicle. , 2016, , .		4
66	System Modeling and Simulation of In-Stream Hydrokinetic Turbines for Power Management and Control. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2017, 139, .	1.6	4
67	<title>Nonlinear robust tracking control of a tensegrity motion simulator</title>. , 1998, , .		3
68	Tensegrity Structures Research Evolution. , 2006, , .		3
69	Simple conditions for arbitrarily close deployment and equilibrium paths and quasistationary deployment. , 2008, , .		3
70	Calculus of variations for guaranteed optimal path planning of aircraft formations. , 2010, , .		3
71	Model-based Wind profiling in the Lower Atmosphere with Multirotor UAS. , 2019, , .		3
72	Tensegrity, Dynamic Networks, and Complex Systems Biology: Emergence in Structural and Information Networks Within Living Cells. , 2006, , 283-310.		3

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73	On Calculus of Variations in Aircraft and Spacecraft Formation Flying Path Planning. , 2010, , .		2
74	Active Control of Four-Bar Tensegrity-Membrane Systems. , 2014, , .		2
75	State Variance-Based Approach to Flight Dynamic Constraints in Multidisciplinary Design Optimization. Journal of Guidance, Control, and Dynamics, 2017, 40, 1206-1220.	2.8	2
76	Modeling and Stability of a Laser Beam-Driven Sail. , 2021, , .		2
77	Design of Structures for Proportional Damping Approximation Using the Energy Gain. , 2009, , .		1
78	Modeling of Four-Bar Tensegrity-Membrane Systems. , 2014, , .		1
79	A Novel Scheme to Accurately Compute Higher Vibration Modes using the Ritz Method and a Two-point BVP Solver. , 2015, , .		1
80	Advances of oscillations in Hopf bifurcation revisited. , 2015, , .		1
81	On the Nonlinear Dynamic Stability of Prestressable Structures. , 2015, , .		1
82	Decoupling of second order systems via linear time invariant transformations. Mechanical Systems and Signal Processing, 2022, 169, 108295.	8.0	1
83	Designing Structures for Proportional Damping. , 2008, , .		0
84	Proportional Damping Approximation Using the Peak to Peak Gain. , 2010, , .		0
85	Modeling and Control of Tensegrity Systems Under LEO Gravitational Effects. , 2013, , .		0
86	Decoupling Transformations for Linear Systems in the Configuration Space. , 2015, , .		0
87	Methods for Modeling Tensegrity Dynamics in LEO. , 2015, , .		0
88	An ocean current turbine system with induction generator and power electronic control. , 2015, , .		0
89	LPV state-feedback control of a tensegrity-membrane system. , 2016, , .		0
90	A Data Model for Turbulence Analysis Downstream of an Ocean Current Turbine Rotor for Hydrokinetic Power Generation. , 2017, , .		0