George Nikolakopoulos

List of Publications by Year
in descending order

109 papers	2,281 citations	304743 22 h-index	276875 41 g-index
109 all docs	109 docs citations	109 times ranked	2063 citing authors

#	Article	IF	Citations
1	Survey on Computer Vision for UAVs: Current Developments and Trends. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 87, 141-168.	3.4	254
2	A state-of-the-art review of structural control systems. JVC/Journal of Vibration and Control, 2015, 21, 919-937.	2.6	206
3	Advanced Nonlinear PID-Based Antagonistic Control for Pneumatic Muscle Actuators. IEEE Transactions on Industrial Electronics, 2014, 61, 6926-6937.	7.9	114
4	Nonlinear MPC for Collision Avoidance and Control of UAVs With Dynamic Obstacles. IEEE Robotics and Automation Letters, 2020, 5, 6001-6008.	5.1	113
5	Power Conservation through Energy Efficient Routing in Wireless Sensor Networks. Sensors, 2009, 9, 7320-7342.	3.8	99
6	Cooperative coverage path planning for visual inspection. Control Engineering Practice, 2018, 74, 118-131.	5.5	83
7	Piecewise Affine Modeling and Constrained Optimal Control for a Pneumatic Artificial Muscle. IEEE Transactions on Industrial Electronics, 2014, 61, 904-916.	7.9	72
8	Model predictive quadrotor indoor position control. , 2011, , .		57
9	Remaining Useful Battery Life Prediction for UAVs based on Machine Learning * *This work has received partial funding from the European Union's Horizon 2020 Research and Innovation Programme under the Grant Agreement No.644128, AEROWORKS. IFAC-PapersOnLine, 2017, 50, 4727-4732.	0.9	55
10	Deploying MAVs for autonomous navigation in dark underground mine environments. Robotics and Autonomous Systems, 2020, 126, 103472.	5.1	52
11	Development and Experimental Verification of a Mobile Client-Centric Networked Controlled System. European Journal of Control, 2005, 11, 229-241.	2.6	47
12	Aerial navigation in obstructed environments with embedded nonlinear model predictive control. , 2019, , .		45
13	Pneumatic artificial muscles: A switching Model Predictive Control approach. Control Engineering Practice, 2013, 21, 1653-1664.	5.5	43
14	Design of a robust PID-control switching scheme for an electrostatic micro-actuator. Control Engineering Practice, 2008, 16, 1321-1328.	5.5	39
15	The Use of a Multilabel Classification Framework for the Detection of Broken Bars and Mixed Eccentricity Faults Based on the Start-Up Transient. IEEE Transactions on Industrial Informatics, 2017, 13, 625-634.	11.3	38
16	Effect of kinematic parameters on MPC based on-line motion planning for an articulated vehicle. Robotics and Autonomous Systems, 2015, 70, 16-24.	5.1	33
17	A survey on pneumatic wall-climbing robots for inspection. , 2016, , .		32
18	Design and development of an exoskeletal wrist prototype via pneumatic artificial muscles. Meccanica, 2015, 50, 2709-2730.	2.0	31

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19	Intelligent data-driven prognostic methodologies for the real-time remaining useful life until the end-of-discharge estimation of the Lithium-Polymer batteries of unmanned aerial vehicles with uncertainty quantification. Applied Energy, 2019, 254, 113677.	10.1	31
20	Detecting broken rotor bars in induction motors with model-based support vector classifiers. Control Engineering Practice, 2016, 52, 15-23.	5.5	28
21	2D visual area coverage and path planning coupled with camera footprints. Control Engineering Practice, 2018, 75, 1-16.	5.5	28
22	Experimental controller tuning and QoS optimization of a wireless transmission scheme for real-time remote control applications. Control Engineering Practice, 2008, 16, 333-346.	5.5	26
23	A full error dynamics switching modeling and control scheme for an articulated vehicle. International Journal of Control, Automation and Systems, 2015, 13, 1221-1232.	2.7	26
24	Novel Considerations on Static Force Modeling of Pneumatic Muscle Actuators. IEEE/ASME Transactions on Mechatronics, 2016, 21, 2647-2659.	5.8	25
25	A fault detection scheme based on minimum identified uncertainty bounds violation for broken rotor bars in induction motors. Control Engineering Practice, 2016, 48, 63-77.	5.5	24
26	A Survey on the Application Trends of Home Service Robotics. , 2018, , .		24
27	Intelligent Robust Controller Design for a Micro-actuator. Journal of Intelligent and Robotic Systems: Theory and Applications, 2006, 47, 299-315.	3.4	22
28	Experimental constrained optimal attitude control of a quadrotor subject to wind disturbances. International Journal of Control, Automation and Systems, 2014, 12, 1289-1302.	2.7	22
29	Multimodality robotic systems: Integrated combined legged-aerial mobility for subterranean search-and-rescue. Robotics and Autonomous Systems, 2022, 154, 104134.	5.1	20
30	Subterranean MAV Navigation based on Nonlinear MPC with Collision Avoidance Constraints. IFAC-PapersOnLine, 2020, 53, 9650-9657.	0.9	19
31	Exploration-RRT: A multi-objective Path Planning and Exploration Framework for Unknown and Unstructured Environments. , 2021, , .		18
32	Adaptive Compression of Slowly Varying Images Transmitted over Wireless Sensor Networks. Sensors, 2010, 10, 7170-7191.	3.8	17
33	Switching networked attitude control of an unmanned quadrotor. International Journal of Control, Automation and Systems, 2013, 11, 389-397.	2.7	17
34	Cooperative coverage for surveillance of 3D structures. , 2017, , .		17
35	Multimodal Aerial Locomotion: An Approach to Active Tool Handling. IEEE Robotics and Automation Magazine, 2018, 25, 57-65.	2.0	16
36	Vortex Actuation via Electric Ducted Fans: an Experimental Study. Journal of Intelligent and Robotic Systems: Theory and Applications, 2019, 95, 955-973.	3.4	16

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37	Switching model predictive control for an articulated vehicle under varying slip angle. , 2012, , .		15
38	Evaluation of visual localization systems in underground mining. , 2016, , .		15
39	Vision-based MAV Navigation in Underground Mine Using Convolutional Neural Network. , 2019, , .		15
40	Non-linear MPC based Navigation for Micro Aerial Vehicles in Constrained Environments. , 2020, , .		15
41	NeBula: TEAM CoSTARâ€™s Robotic Autonomy Solution that Won Phase II of DARPA Subterranean Challenge. , 2022, 2, 1432-1506.		15
42	Experimental model derivation and control of a variable pitch propeller equipped quadrotor. , 2014, , .		14
43	Towards MAV Navigation in Underground Mine Using Deep Learning. , 2018, , .		14
44	Towards Autonomous Surveying of Underground Mine Using MAVs. Mechanisms and Machine Science, 2019, , 173-180.	0.5	14
45	A Generalized Reduced-Complexity Inertial Navigation System for Unmanned Aerial Vehicles. IEEE Transactions on Control Systems Technology, 2017, 25, 192-207.	5.2	13
46	Novel considerations on the negative pressure adhesion of electric ducted fans: An experimental study. , 2017, , .		13
47	Ultra WideBand enabled Inertial Odometry for Generic Localization. IFAC-PapersOnLine, 2017, 50, 11465-11472.	0.9	13
48	Posicast control of structures using MR dampers. Structural Control and Health Monitoring, 2016, 23, 1121-1134.	4.0	12
49	HUmanoid Robotic Leg via pneumatic muscle actuators: implementation and control. Meccanica, 2018, 53, 465-480.	2.0	12
50	A Unified NMPC Scheme for MAVs Navigation With 3D Collision Avoidance Under Position Uncertainty. IEEE Robotics and Automation Letters, 2020, 5, 5740-5747.	5.1	12
51	Broken bars fault diagnosis based on uncertainty bounds violation for three-phase induction motors. International Transactions on Electrical Energy Systems, 2015, 25, 304-325.	1.9	11
52	A Survey on Control Configuration Selection and New Challenges in Relation to Wireless Sensor and Actuator Networks. IFAC-PapersOnLine, 2017, 50, 8810-8825.	0.9	11
53	A Scalable Distributed Collision Avoidance Scheme for Multi-agent UAV systems. , 2021, , .		11
54	A Decentralized Sensor Fusion Scheme for Multi Sensorial Fault Resilient Pose Estimation. Sensors, 2021, 21, 8259.	3.8	11

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55	COMPRA: A COMPact Reactive Autonomy Framework for Subterranean MAV Based Search-And-Rescue Operations. Journal of Intelligent and Robotic Systems: Theory and Applications, 2022, 105, .	3.4	11
56	Bearing fault detection and diagnosis by fusing vibration data. , 2016, , .		10
57	Semi-active control of flexible structures using closed-loop input shaping techniques. Structural Control and Health Monitoring, 2017, 24, e1913.	4.0	10
58	Adaptive Internal Model Control scheme for a Pneumatic Artificial Muscle. , 2013, , .		9
59	Generalized center of gravity compensation for multirotors with application to aerial manipulation. , 2017, , .		9
60	Bio-Inspired Climbing Robots in Wet Environments: Recent Trends in Adhesion Methods and Materials. , 2018, , .		9
61	Towards Visual Inspection of Wind Turbines: A Case of Visual Data Acquisition Using Autonomous Aerial Robots. IEEE Access, 2020, 8, 181650-181661.	4.2	9
62	Reactive Navigation of an Unmanned Aerial Vehicle With Perception-Based Obstacle Avoidance Constraints. IEEE Transactions on Control Systems Technology, 2022, 30, 1847-1862.	5.2	9
63	Switching model predictive control of a pneumatic artificial muscle. International Journal of Control, Automation and Systems, 2013, 11, 1223-1231.	2.7	8
64	Start-up analysis methods for the diagnosis of rotor asymmetries in induction motors-seeing is believing. , 2016, , .		8
65	On Model-based Adhesion Control of a Vortex Climbing Robot. , 2019, , .		8
66	On the Design, Modeling and Experimental Verification of a Floating Satellite Platform. IEEE Robotics and Automation Letters, 2022, 7, 1364-1371.	5.1	8
67	A Fault diagnosis scheme for three phase induction motors based on uncertainty bounds. , 2012, , .		7
68	Stator winding short circuit fault detection based on set membership identification for three phase induction motors. , 2012, , .		7
69	Faults Classification Scheme for Three Phase Induction Motor. International Journal of System Dynamics Applications, 2014, 3, 1-20.	0.3	7
70	Combined networked switching output feedback control with -region stability forÂperformance improvement. International Journal of Control, 2014, 87, 1172-1180.	1.9	7
71	On vision enabled aerial manipulation for multirotors. , 2017, , .		7
72	A Haptic Navigation Aid for Individuals with Visual Impairments: Indoor and Outdoor Feasibility Evaluations of the LaserNavigator. Journal of Visual Impairment and Blindness, 2019, 113, 194-201.	0.7	6

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73	Multi-Agent Collaborative Path Planning Based on Staying Alive Policy. Robotics, 2020, 9, 101.	3.5	6
74	Path following for an articulated vehicle based on switching model predictive control under varying speeds and slip angles. , 2012, , .		5
75	Stabilization of an Inverted Pendulum via Human Brain Inspired Controller Design. , 2019, , .		5
76	MAV Navigation in Unknown Dark Underground Mines Using Deep Learning. , 2020, , .		5
77	External force estimation and disturbance rejection for Micro Aerial Vehicles. Expert Systems With Applications, 2022, 200, 116883.	7.6	5
78	On-Line path planning for an articulated vehicle based on Model Predictive Control. , 2013, , .		4
79	Towards the development of a novel upper-body pneumatic humanoid: Design and implementation. , 2016, , .		4
80	Design, development and control of a human-inspired two-arm robot via Pneumatic Artificial Muscles. , 2017, , .		4
81	On the covering of a polygonal region with fixed size rectangles with an application towards aerial inspection. , 2017, , .		4
82	Guidance for Autonomous Aerial Manipulator Using Stereo Vision. Journal of Intelligent and Robotic Systems: Theory and Applications, 2020, 100, 1545-1557.	3.4	4
83	Towards Autonomous Aerial Scouting Using Multi-Rotors in Subterranean Tunnel Navigation. IEEE Access, 2021, 9, 66477-66485.	4.2	4
84	Switching Model Predictive Control for Online Structural Reformations of a Foldable Quadrotor. , 2020, , .		4
85	Geometry Aware NMPC Scheme for Morphing Quadrotor Navigation in Restricted Entrances. , 2021, , .		4
86	Fault diagnosis, failure prognosis and fault tolerant control of aerospace/unmanned aerial systems. , 2016, , .		3
87	Reduced complexity calibration of MEMS IMUs. , 2017, , .		3
88	Monocular Vision-based Obstacle Avoidance Scheme for Micro Aerial Vehicle Navigation. , 2021, , .		3
89	Cooperative planning for multi-site asteroid visual coverage. Advanced Robotics, 2021, 35, 1332-1346.	1.8	3
90	Automatizing the detection of rotor failures in induction motors operated via soft-starters. , 2015, , .		2

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91	Design, Development and Experimental Evaluation of a Vortex Actuation System. , 2018, , .		2
92	Online Multi-Agent Based Cooperative Exploration and Coverage in Complex Environment. , 2019, , .		2
93	An exploratory approach to fetal heart rateâ€"pH-based systems. Signal, Image and Video Processing, 2021, 15, 43-51.	2.7	2
94	Range-aided ego-centric collaborative pose estimation for multiple robots. Expert Systems With Applications, 2022, , 117052.	7.6	2
95	Investigation of changes in modal characteristics before and after damage of a railway bridge: a case study. IES Journal Part A: Civil and Structural Engineering, 2015, 8, 131-144.	0.4	1
96	Symbolic time series analysis of the soft starting transient in induction machines. , 2015, , .		1
97	Dynamic visual sensing based on MPC controlled UAVs. , 2017, , .		1
98	Replicating human brain mechanisms towards balancing. , 2019, , .		1
99	External Force Estimation based on Nonlinear Moving Horizon Estimation for MAV Navigation. , 2020, , .		1
100	A Survey of DNA-based Computing Devices and their Applications. , 2021, , .		1
101	On the Unification of Legged and Aerial Robots for Planetary Exploration Missions. Applied Sciences (Switzerland), 2022, 12, 3983.	2.5	1
102	On the adaptive performance improvement of a trajectory tracking controller for non-holonomic mobile robots. , 2011, , .		0
103	On the design, development and motion control of a HUmanoid Robotic Leg via pneumatic artificial muscles. , 2016, , .		0
104	On Adhesion Modeling and Control of a Vortex Actuator for Climbing Robots. , 2019, , .		0
105	Dual Set-membership Identification and Explicit MPC for an Electric Ducted Fan-based Actuator for Vortex Adhesion. , 2019, , .		0
106	Vortex Robot Platform for Autonomous Inspection: Modeling and Simulation. , 2019, , .		0
107	Correction to â€œTowards Autonomous Aerial Scouting Using Multi-Rotors in Subterranean Tunnel Navigationâ€. IEEE Access, 2021, 9, 80208-80208.	4.2	0
108	Towards Robust and Efficient Plane Detection from 3D Point Cloud. , 2021, , .		0

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109	Aerial Thermal Image based Convolutional Neural Networks for Human Detection in SubT Environments. , 2021, , .		0