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	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
2	On the Design, Modeling and Experimental Verification of a Floating Satellite Platform. IEEE Robotics and Automation Letters, 2022, 7, 1364-1371.	5.1	8
3	External force estimation and disturbance rejection for Micro Aerial Vehicles. Expert Systems With Applications, 2022, 200, 116883.	7.6	5
4	Range-aided ego-centric collaborative pose estimation for multiple robots. Expert Systems With Applications, 2022, , 117052.	7.6	2
5	On the Unification of Legged and Aerial Robots for Planetary Exploration Missions. Applied Sciences (Switzerland), 2022, 12, 3983.	2.5	1
6	Multimodality robotic systems: Integrated combined legged-aerial mobility for subterranean search-and-rescue. Robotics and Autonomous Systems, 2022, 154, 104134.	5.1	20
7	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
8	NeBula: TEAM CoSTARâ€™s Robotic Autonomy Solution that Won Phase II of DARPA Subterranean Challenge. , 2022, 2, 1432-1506.		15
9	An exploratory approach to fetal heart rateâ€"pH-based systems. Signal, Image and Video Processing, 2021, 15, 43-51.	2.7	2
10	Correction to â€œTowards Autonomous Aerial Scouting Using Multi-Rotors in Subterranean Tunnel Navigationâ€. IEEE Access, 2021, 9, 80208-80208.	4.2	0
11	Towards Autonomous Aerial Scouting Using Multi-Rotors in Subterranean Tunnel Navigation. IEEE Access, 2021, 9, 66477-66485.	4.2	4
12	Monocular Vision-based Obstacle Avoidance Scheme for Micro Aerial Vehicle Navigation. , 2021, , .		3
13	Towards Robust and Efficient Plane Detection from 3D Point Cloud. , 2021, , .		0
14	Aerial Thermal Image based Convolutional Neural Networks for Human Detection in SubT Environments. , 2021, , .		0
15	Cooperative planning for multi-site asteroid visual coverage. Advanced Robotics, 2021, 35, 1332-1346.	1.8	3
16	Geometry Aware NMPC Scheme for Morphing Quadrotor Navigation in Restricted Entrances. , 2021, , .		4
17	A Survey of DNA-based Computing Devices and their Applications. , 2021, , .		1
18	Exploration-RRT: A multi-objective Path Planning and Exploration Framework for Unknown and Unstructured Environments. , 2021, , .		18

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19	A Scalable Distributed Collision Avoidance Scheme for Multi-agent UAV systems. , 2021, , .		11
20	A Decentralized Sensor Fusion Scheme for Multi Sensorial Fault Resilient Pose Estimation. Sensors, 2021, 21, 8259.	3.8	11
21	Guidance for Autonomous Aerial Manipulator Using Stereo Vision. Journal of Intelligent and Robotic Systems: Theory and Applications, 2020, 100, 1545-1557.	3.4	4
22	Nonlinear MPC for Collision Avoidance and Control of UAVs With Dynamic Obstacles. IEEE Robotics and Automation Letters, 2020, 5, 6001-6008.	5.1	113
23	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
24	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
25	Multi-Agent Collaborative Path Planning Based on Staying Alive Policy. Robotics, 2020, 9, 101.	3.5	6
26	Deploying MAVs for autonomous navigation in dark underground mine environments. Robotics and Autonomous Systems, 2020, 126, 103472.	5.1	52
27	MAV Navigation in Unknown Dark Underground Mines Using Deep Learning. , 2020, , .		5
28	Non-linear MPC based Navigation for Micro Aerial Vehicles in Constrained Environments. , 2020, , .		15
29	External Force Estimation based on Nonlinear Moving Horizon Estimation for MAV Navigation. , 2020, , .		1
30	Subterranean MAV Navigation based on Nonlinear MPC with Collision Avoidance Constraints. IFAC-PapersOnLine, 2020, 53, 9650-9657.	0.9	19
31	Switching Model Predictive Control for Online Structural Reformations of a Foldable Quadrotor. , 2020, , .		4
32	Replicating human brain mechanisms towards balancing. , 2019, , .		1
33	Aerial navigation in obstructed environments with embedded nonlinear model predictive control. , 2019, , .		45
34	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
35	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
36	Online Multi-Agent Based Cooperative Exploration and Coverage in Complex Environment. , 2019, , .		2

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37	On Adhesion Modeling and Control of a Vortex Actuator for Climbing Robots. , 2019, , .		0
38	Dual Set-membership Identification and Explicit MPC for an Electric Ducted Fan-based Actuator for Vortex Adhesion. , 2019, , .		0
39	Stabilization of an Inverted Pendulum via Human Brain Inspired Controller Design. , 2019, , .		5
40	Vision-based MAV Navigation in Underground Mine Using Convolutional Neural Network. , 2019, , .		15
41	On Model-based Adhesion Control of a Vortex Climbing Robot. , 2019, , .		8
42	Vortex Robot Platform for Autonomous Inspection: Modeling and Simulation. , 2019, , .		0
43	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
44	Towards Autonomous Surveying of Underground Mine Using MAVs. Mechanisms and Machine Science, 2019, , 173-180.	0.5	14
45	2D visual area coverage and path planning coupled with camera footprints. Control Engineering Practice, 2018, 75, 1-16.	5.5	28
46	Cooperative coverage path planning for visual inspection. Control Engineering Practice, 2018, 74, 118-131.	5.5	83
47	HUmanoid Robotic Leg via pneumatic muscle actuators: implementation and control. Meccanica, 2018, 53, 465-480.	2.0	12
48	Bio-Inspired Climbing Robots in Wet Environments: Recent Trends in Adhesion Methods and Materials. , 2018, , .		9
49	A Survey on the Application Trends of Home Service Robotics. , 2018, , .		24
50	Towards MAV Navigation in Underground Mine Using Deep Learning. , 2018, , .		14
51	Multimodal Aerial Locomotion: An Approach to Active Tool Handling. IEEE Robotics and Automation Magazine, 2018, 25, 57-65.	2.0	16
52	Design, Development and Experimental Evaluation of a Vortex Actuation System. , 2018, , .		2
53	A Generalized Reduced-Complexity Inertial Navigation System for Unmanned Aerial Vehicles. IEEE Transactions on Control Systems Technology, 2017, 25, 192-207.	5.2	13
54	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

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55	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
56	Design, development and control of a human-inspired two-arm robot via Pneumatic Artificial Muscles. , 2017, , .		4
57	Reduced complexity calibration of MEMS IMUs. , 2017, , .		3
58	Dynamic visual sensing based on MPC controlled UAVs. , 2017, , .		1
59	Novel considerations on the negative pressure adhesion of electric ducted fans: An experimental study. , 2017, , .		13
60	Semi-active control of flexible structures using closed-loop input shaping techniques. Structural Control and Health Monitoring, 2017, 24, e1913.	4.0	10
61	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
62	Ultra WideBand enabled Inertial Odometry for Generic Localization. IFAC-PapersOnLine, 2017, 50, 11465-11472.	0.9	13
63	Remaining Useful Battery Life Prediction for UAVs based on Machine Learning * *This work has received partial funding from the European Unionâ€™s Horizon 2020 Research and Innovation Programme under the Grant Agreement No.644128, AEROWORKS. IFAC-PapersOnLine, 2017, 50, 4727-4732.	0.9	55
64	Cooperative coverage for surveillance of 3D structures. , 2017, , .		17
65	Generalized center of gravity compensation for multirotors with application to aerial manipulation. , 2017, , .		9
66	On vision enabled aerial manipulation for multirotors. , 2017, , .		7
67	On the covering of a polygonal region with fixed size rectangles with an application towards aerial inspection. , 2017, , .		4
68	Posicast control of structures using MR dampers. Structural Control and Health Monitoring, 2016, 23, 1121-1134.	4.0	12
69	On the design, development and motion control of a HUmanoid Robotic Leg via pneumatic artificial muscles. , 2016, , .		0
70	Bearing fault detection and diagnosis by fusing vibration data. , 2016, , .		10
71	Towards the development of a novel upper-body pneumatic humanoid: Design and implementation. , 2016, , .		4
72	Detecting broken rotor bars in induction motors with model-based support vector classifiers. Control Engineering Practice, 2016, 52, 15-23.	5.5	28

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73	Fault diagnosis, failure prognosis and fault tolerant control of aerospace/unmanned aerial systems. , 2016, , .		3
74	Evaluation of visual localization systems in underground mining. , 2016, , .		15
75	Start-up analysis methods for the diagnosis of rotor asymmetries in induction motors-seeing is believing. , 2016, , .		8
76	A survey on pneumatic wall-climbing robots for inspection. , 2016, , .		32
77	Novel Considerations on Static Force Modeling of Pneumatic Muscle Actuators. IEEE/ASME Transactions on Mechatronics, 2016, 21, 2647-2659.	5.8	25
78	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
79	Automatizing the detection of rotor failures in induction motors operated via soft-starters. , 2015, , .		2
80	Design and development of an exoskeletal wrist prototype via pneumatic artificial muscles. Meccanica, 2015, 50, 2709-2730.	2.0	31
81	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
82	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
83	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
84	Symbolic time series analysis of the soft starting transient in induction machines. , 2015, , .		1
85	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
86	A state-of-the-art review of structural control systems. JVC/Journal of Vibration and Control, 2015, 21, 919-937.	2.6	206
87	Faults Classification Scheme for Three Phase Induction Motor. International Journal of System Dynamics Applications, 2014, 3, 1-20.	0.3	7
88	Experimental model derivation and control of a variable pitch propeller equipped quadrotor. , 2014, , .		14
89	Advanced Nonlinear PID-Based Antagonistic Control for Pneumatic Muscle Actuators. IEEE Transactions on Industrial Electronics, 2014, 61, 6926-6937.	7.9	114
90	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

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91	Combined networked switching output feedback control with -region stability forÂperformance improvement. International Journal of Control, 2014, 87, 1172-1180.	1.9	7
92	Piecewise Affine Modeling and Constrained Optimal Control for a Pneumatic Artificial Muscle. IEEE Transactions on Industrial Electronics, 2014, 61, 904-916.	7.9	72
93	Switching networked attitude control of an unmanned quadrotor. International Journal of Control, Automation and Systems, 2013, 11, 389-397.	2.7	17
94	Pneumatic artificial muscles: A switching Model Predictive Control approach. Control Engineering Practice, 2013, 21, 1653-1664.	5.5	43
95	Switching model predictive control of a pneumatic artificial muscle. International Journal of Control, Automation and Systems, 2013, 11, 1223-1231.	2.7	8
96	On-Line path planning for an articulated vehicle based on Model Predictive Control. , 2013, , .		4
97	Adaptive Internal Model Control scheme for a Pneumatic Artificial Muscle. , 2013, , .		9
98	A Fault diagnosis scheme for three phase induction motors based on uncertainty bounds. , 2012, , .		7
99	Stator winding short circuit fault detection based on set membership identification for three phase induction motors. , 2012, , .		7
100	Switching model predictive control for an articulated vehicle under varying slip angle. , 2012, , .		15
101	Path following for an articulated vehicle based on switching model predictive control under varying speeds and slip angles. , 2012, , .		5
102	Model predictive quadrotor indoor position control. , 2011, , .		57
103	On the adaptive performance improvement of a trajectory tracking controller for non-holonomic mobile robots. , 2011, , .		0
104	Adaptive Compression of Slowly Varying Images Transmitted over Wireless Sensor Networks. Sensors, 2010, 10, 7170-7191.	3.8	17
105	Power Conservation through Energy Efficient Routing in Wireless Sensor Networks. Sensors, 2009, 9, 7320-7342.	3.8	99
106	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
107	Design of a robust PID-control switching scheme for an electrostatic micro-actuator. Control Engineering Practice, 2008, 16, 1321-1328.	5.5	39
108	Intelligent Robust Controller Design for a Micro-actuator. Journal of Intelligent and Robotic Systems: Theory and Applications, 2006, 47, 299-315.	3.4	22

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109	Development and Experimental Verification of a Mobile Client-Centric Networked Controlled System. European Journal of Control, 2005, 11, 229-241.	2.6	47