

George K I Mann

List of Publications by Year in descending order

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135
papers

2,564
citations

361045

20
h-index

243296

44
g-index

135
all docs

135
docs citations

135
times ranked

2085
citing authors

#	ARTICLE	IF	CITATIONS
1	Developments in hardware systems of active upper-limb exoskeleton robots: A review. <i>Robotics and Autonomous Systems</i> , 2016, 75, 203-220.	3.0	355
2	Analysis of direct action fuzzy PID controller structures. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 1999, 29, 371-388.	5.5	256
3	New methodology for analytical and optimal design of fuzzy PID controllers. <i>IEEE Transactions on Fuzzy Systems</i> , 1999, 7, 521-539.	6.5	199
4	A systematic study of fuzzy PID controllers-function-based evaluation approach. <i>IEEE Transactions on Fuzzy Systems</i> , 2001, 9, 699-712.	6.5	160
5	Digital Twin for the Oil and Gas Industry: Overview, Research Trends, Opportunities, and Challenges. <i>IEEE Access</i> , 2020, 8, 104175-104197.	2.6	151
6	Model Predictive Control of Nonholonomic Mobile Robots Without Stabilizing Constraints and Costs. <i>IEEE Transactions on Control Systems Technology</i> , 2016, 24, 1394-1406.	3.2	86
7	The Internet of Things in the Oil and Gas Industry: A Systematic Review. <i>IEEE Internet of Things Journal</i> , 2020, 7, 8654-8673.	5.5	77
8	Two-level tuning of fuzzy PID controllers. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2001, 31, 263-269.	5.5	69
9	Behavior-modulation technique in mobile robotics using fuzzy discrete event system. , 2006, 22, 903-916.		61
10	Integrated fuzzy logic and genetic algorithmic approach for simultaneous localization and mapping of mobile robots. <i>Applied Soft Computing Journal</i> , 2008, 8, 150-165.	4.1	61
11	An Object-Based Visual Attention Model for Robotic Applications. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2010, 40, 1398-1412.	5.5	53
12	Mobile robot navigation using motor schema and fuzzy context dependent behavior modulation. <i>Applied Soft Computing Journal</i> , 2008, 8, 422-436.	4.1	45
13	An Ultrasonic and Vision-Based Relative Positioning Sensor for Multirobot Localization. <i>IEEE Sensors Journal</i> , 2015, 15, 1716-1726.	2.4	38
14	Time-domain based design and analysis of new PID tuning rules. <i>IET Control Theory and Applications</i> , 2001, 148, 251-261.	1.7	36
15	Design and Tuning of Standard Additive Model Based Fuzzy PID Controllers for Multivariable Process Systems. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2008, 38, 667-674.	5.5	34
16	Behavior Coordination of Mobile Robotics Using Supervisory Control of Fuzzy Discrete Event Systems. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2011, 41, 1224-1238.	5.5	33
17	Three-dimensional min-max-gravity based fuzzy PID inference analysis and tuning. <i>Fuzzy Sets and Systems</i> , 2005, 156, 300-323.	1.6	30
18	Distributed Leader-Assistive Localization Method for a Heterogeneous Multirobotic System. <i>IEEE Transactions on Automation Science and Engineering</i> , 2015, 12, 795-809.	3.4	29

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19	A review on hybrid myoelectric control systems for upper limb prosthesis. , 2015, , .		27
20	Decentralized Cooperative Localization for Heterogeneous Multi-robot System Using Split Covariance Intersection Filter. , 2014, , .		26
21	Appearance-Based Visual-Teach-And-Repeat Navigation Technique for Micro Aerial Vehicle. Journal of Intelligent and Robotic Systems: Theory and Applications, 2016, 84, 217-240.	2.0	25
22	A Probabilistic Model of Overt Visual Attention for Cognitive Robots. IEEE Transactions on Systems, Man, and Cybernetics, 2010, 40, 1305-1318.	5.5	23
23	Development of a relative localization scheme for ground-aerial multi-robot systems. , 2012, , .		23
24	An Optimization Based Approach for Relative Localization and Relative Tracking Control in Multi-Robot Systems. Journal of Intelligent and Robotic Systems: Theory and Applications, 2017, 85, 385-408.	2.0	21
25	Leader follower based formation control strategies for nonholonomic mobile robots: Design, implementation and experimental validation. , 2010, , .		19
26	Distributed fuzzy discrete event system for robotic sensory information processing. Expert Systems, 2006, 23, 273-289.	2.9	18
27	Development and Evaluation of Object-Based Visual Attention for Automatic Perception of Robots. IEEE Transactions on Automation Science and Engineering, 2013, 10, 365-379.	3.4	18
28	Predictive Path Following of Mobile Robots without Terminal Stabilizing Constraints**Authors M.W.M., T.F., and K.W. are supported by the Deutsche Forschungsgemeinschaft, Grants WO 2056/1 and WO 2056/4-1. Authors M.W.M., G.K.I.M., and R.G.G. are supported by Natural Sciences and Engineering Research Council of Canada (NSERC), the Research and Development Corporation (RDC), C-CORE J.I. Clark Chair, and Memorial University of Newfoundland.. IFAC-PapersOnLine, 2017, 50, 9852-9857.	0.5	18
29	Controller for a small induction-generator based wind-turbine. Applied Energy, 2008, 85, 218-227.	5.1	17
30	Micro-grid system based on renewable power generation units. , 2010, , .		17
31	Vision-based qualitative path-following control of quadrotor aerial vehicle. , 2014, , .		17
32	Developing Computationally Efficient Nonlinear Cubature Kalman Filtering for Visual Inertial Odometry. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2019, 141, .	0.9	17
33	A Goal-Directed Visual Perception System Using Object-Based Top-Down Attention. IEEE Transactions on Autonomous Mental Development, 2012, 4, 87-103.	2.3	16
34	Interaction of open and closed loop control in MPC. Automatica, 2017, 82, 243-250.	3.0	16
35	Unmanned Aerial Systems for the Oil and Gas Industry: Overview, Applications, and Challenges. IEEE Access, 2020, 8, 166980-166997.	2.6	16
36	Stabilizing NMPC of wheeled mobile robots using open-source real-time software. , 2013, , .		15

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37	Modular Supervisory Control and Hierarchical Supervisory Control of Fuzzy Discrete-Event Systems. IEEE Transactions on Automation Science and Engineering, 2012, 9, 353-364.	3.4	13
38	Microgrid reliability evaluation considering the intermittency effect of renewable energy sources. International Journal of Smart Grid and Clean Energy, 2017, 6, 252-268.	0.4	13
39	Landmark detection and localization for mobile robot applications: a multisensor approach. Robotica, 2010, 28, 663-673.	1.3	12
40	Generalizing the Decentralized Control of Fuzzy Discrete Event Systems. IEEE Transactions on Fuzzy Systems, 2012, 20, 699-714.	6.5	12
41	Hybrid Vision Based Reach-to-Grasp Task Planning Method for Trans-Humeral Prostheses. IEEE Access, 2017, 5, 16149-16161.	2.6	12
42	Efficient distributed multi-robot localization: A target tracking inspired design. , 2015, , .		11
43	A comparison of low cost wireless communication methods for remote control of grid-tied converters. , 2017, , .		11
44	Stability analysis of the discrete-time cubature Kalman filter. , 2015, , .		10
45	Occupancy grid based distributed MPC for mobile robots. , 2017, , .		10
46	Anthro-X: Anthropomorphic lower extremity exoskeleton robot for power assistance. , 2018, , .		10
47	Observability-Constrained VINS for MAVs Using Interacting Multiple Model Algorithm. IEEE Transactions on Aerospace and Electronic Systems, 2021, 57, 1423-1442.	2.6	10
48	An evolutionary algorithm for simultaneous localization and mapping (SLAM) of mobile robots. Advanced Robotics, 2007, 21, 1031-1050.	1.1	9
49	Discrete event systems based formation control framework to coordinate multiple nonholonomic mobile robots. , 2009, , .		9
50	Mobile robot behavior coordination using supervisory control of Fuzzy Discrete Event Systems. , 2009, , .		9
51	Relative Localization Approach for Combined Aerial and Ground Robotic System. Journal of Intelligent and Robotic Systems: Theory and Applications, 2015, 77, 113-133.	2.0	9
52	Control Curve Design for Nonlinear (or Fuzzy) Proportional Actions Using Spline-based Functions. Automatica, 1998, 34, 1125-1133.	3.0	8
53	Vision-based hybrid control strategy for autonomous docking of a mobile robot. , 0, , .		8
54	A Biologically Inspired Bayesian Model of Visual Attention for Humanoid Robots. , 2006, , .		8

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55	Vision-based hybrid control scheme for autonomous parking of a mobile robot. <i>Advanced Robotics</i> , 2007, 21, 905-930.	1.1	8
56	A SINGLE-OBJECT TRACKING METHOD FOR ROBOTS USING OBJECT-BASED VISUAL ATTENTION. <i>International Journal of Humanoid Robotics</i> , 2012, 09, 1250030.	0.6	8
57	Optimization and modeling of a stand-alone wind/PV hybrid energy system. , 2012, , .		8
58	Comparison of stabilizing NMPC designs for wheeled mobile robots: An experimental study. , 2015, , .		8
59	Differential communication with distributed MPC based on occupancy grid. <i>Information Sciences</i> , 2018, 453, 426-441.	4.0	8
60	Adaptive hierarchical tuning of fuzzy controllers. <i>Expert Systems</i> , 2002, 19, 34-45.	2.9	7
61	Moving Object Detection in Indoor Environments Using Laser Range Data. , 2006, , .		7
62	Integrated Laser-Camera Sensor for the Detection and Localization of Landmarks for Robotic Applications. , 2008, , .		7
63	An Object-based Visual Attention Model for Robots. , 2008, , .		7
64	Optimization and a comparison between renewable and non-renewable energy systems for a telecommunication site. , 2012, , .		7
65	Pairwise observable relative localization in ground aerial multi-robot networks. , 2014, , .		7
66	Distributed collaborative localization for a heterogeneous multi-robot system. , 2014, , .		7
67	Formation stabilization of nonholonomic robots using nonlinear model predictive control. , 2014, , .		7
68	Decentralized Cooperative Localization Approach for Autonomous Multirobot Systems. <i>Journal of Robotics</i> , 2016, 2016, 1-18.	0.6	7
69	Robotic Prosthetic Limbs. <i>Journal of Robotics</i> , 2018, 2018, 1-2.	0.6	7
70	Concurrent mapping and localization for mobile robot using soft computing techniques. , 2005, , .		6
71	Pseudo-linear measurement approach for heterogeneous multi-robot relative localization. , 2013, , .		6
72	Nonlinear moving horizon state estimation for multi-robot relative localization. , 2014, , .		6

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73	AUV-Based Plume Tracking: A Simulation Study. Journal of Control Science and Engineering, 2016, 2016, 1-15.	0.8	6
74	IBVS and EMG based reach-to-grasp task planning method for a trans-humeral prosthesis. , 2016, , .		6
75	Developing a Cubature Multi-state Constraint Kalman Filter for Visual-Inertial Navigation System. , 2017, , .		6
76	An Evolutionary SLAM Algorithm for Mobile Robots. , 2006, , .		5
77	A Task-driven Object-based Attention Model for Robots. , 2007, , .		5
78	Estimation of prosthetic arm motions using stump arm kinematics. , 2014, , .		5
79	Observability Analysis of Relative Localization Filters Subjected to Platform Velocity Constraints. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, .	0.9	5
80	The Right Invariant Nonlinear Complementary Filter for Low Cost Attitude and Heading Estimation of Platforms. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2018, 140, .	0.9	5
81	Comparing global measures of image similarity for use in topological localization of mobile robots. Canadian Conference on Electrical and Computer Engineering, 2008, , .	0.0	4
82	A probabilistic approach for attention-based multi-modal human-robot interaction. , 2009, , .		4
83	Decentralized modular control of concurrent Fuzzy Discrete Event Systems. , 2010, , .		4
84	Relative localization with symmetry preserving observers. , 2014, , .		4
85	A Jacobian free approach for multi-robot relative localization. , 2014, , .		4
86	Observability Analysis of Position Estimation for Quadrotors With Modified Dynamics and Range Measurements. , 2019, , .		4
87	Fuzzy discrete event system based behavior modulation in mobile robotics. , 2005, , .		3
88	Object- and space-based visual attention: An integrated framework for autonomous robots. , 2008, , .		3
89	A novel robotic visual perception method using object-based attention. , 2009, , .		3
90	A hybrid control strategy for multiple mobile robots with nonholonomic constraints. , 2009, , .		3

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91	An acoustic signal propagation experiment beneath sea ice. Ocean Engineering, 2012, 43, 56-63.	1.9	3
92	Dexterity measure of upper limb exoskeleton robot with improved redundancy. , 2013, , .		3
93	Surface EMG signals based elbow joint torque prediction. , 2013, , .		3
94	Tracking control and state estimation of a mobile robot based on NMPC and MHE. , 2016, , .		3
95	GPS Integrated Inertial Navigation System Using Interactive Multiple Model Extended Kalman Filtering. , 2018, , .		3
96	CKF-Based Visual Inertial Odometry for Long-Term Trajectory Operations. Journal of Robotics, 2020, 2020, 1-14.	0.6	3
97	Toward Developing an Indoor Localization System for MAVs Using Two or Three RF Range Anchors: An Observability Based Approach. IEEE Sensors Journal, 2022, 22, 5173-5187.	2.4	3
98	Kalman Filter based Range Estimation and Clock Synchronization for Ultra Wide Band Networks. , 2020, , .		3
99	Sampling-based path planning for robust feature-based visual servoing. , 2009, , .		2
100	Modeling of top-down object-based attention using probabilistic neural network. , 2009, , .		2
101	Modeling of top-down influences on object-based visual attention for robots. , 2009, , .		2
102	Tightly-coupled multi robot coordination using decentralized supervisory control of Fuzzy Discrete Event Systems. , 2011, , .		2
103	Vision-Based Qualitative Path-Following Control of Quadrotor Aerial Vehicle with Speeded-Up Robust Features. , 2014, , .		2
104	Design and Analysis of a Pose Estimator for Quadrotor MAVs With Modified Dynamics and Range Measurements. , 2017, , .		2
105	Likelihood-based iterated cubature multi-state-constraint Kalman filter for visual inertial navigation system. , 2017, , .		2
106	Automated Seedling Height Assessment for Tree Nurseries Using Point Cloud Processing. , 2019, , .		2
107	Behavior-based Robot Control Using Fuzzy Discrete Event System. , 2006, , .		1
108	Task-driven moving object detection for robots using visual attention. , 2007, , .		1

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109	Design and tuning of standard additive model based fuzzy PID controllers for multi-variable process systems. , 2007, , .		1
110	Supervisory control of Fuzzy Discrete Event Systems and its application to mobile robot navigation. , 2009, , .		1
111	An autonomous visual perception model for robots using object-based attention mechanism. , 2009, , .		1
112	A general architecture for decentralized supervisory control of Fuzzy Discrete Event Systems. , 2012, , .		1
113	Automated tuning of the nonlinear complementary filter for an Attitude Heading Reference observer. , 2013, , .		1
114	Low-cost and open source SCADA options for remote control and monitoring of inverters. , 2017, , .		1
115	Developing Moving Horizon Estimation Based Ranging Measurement for Supporting Vision-Aided Inertial Navigation System. , 2017, , .		1
116	Nonlinear MPC Without Terminal Costs or Constraints for Multi-Rotor Aerial Vehicles. , 2022, 6, 440-445.		1
117	Computationally Efficient Stability-Based Nonlinear Model Predictive Control Design for Quadrotor Aerial Vehicles. IEEE Transactions on Control Systems Technology, 2023, 31, 615-630.	3.2	1
118	An integrated approach for multilane robot motion planning using motor schema and fuzzy logic. , 0, , .		0
119	A Behavior-based Control of an Object-pulling Robot Using Fuzzy Discrete Event System. , 2006, , .		0
120	Decoupled fuzzy PI Controller Tuning Scheme for Multivariable Processes. , 2006, , .		0
121	Performance of a Controller for Small Grid Connected Wind Turbines. , 2007, , .		0
122	Two-Level Tuning of Fuzzy PID Controllers for Multivariable Process Systems. Mathematical Modelling: Theory and Applications, 2008, , 283-312.	0.2	0
123	Range estimation using TDL neural networks and application to image-based visual servoing. , 2008, , .		0
124	Control and instrumentation for small wind turbines. , 2008, , .		0
125	Target tracking for moving robots using object-based visual attention. , 2010, , .		0
126	Hierarchical supervisory control of fuzzy discrete event systems. , 2011, , .		0

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127	RFID assisted Flexible Manufacturing System. , 2013, , .		0
128	Simulation of aided AUV navigation and adaptive plume tracking. , 2014, , .		0
129	An efficient distributed data correspondence scheme for multi-robot relative localization. , 2015, , .		0
130	Experimental Speedup and Stability Validation for Multi-Step MPC * *M.W. Mehrez, K. Worthmann, and J. Pannek are supported by the Deutsche Forschungsgemeinschaft, Grant WO 2056/1-1 and WO 2056/4-1. M.W. Mehrez, G.K.I. Mann, and R.G. Gosine are supported by Natural Sciences and Engineering Research Council of Canada (NSERC), the Research and Development Corporation (RDC), C-CORE J.I. Clark Chair, and Memorial University of Newfoundland.. IFAC-PapersOnLine, 2017, 50, 8698-8703.	0.5	0
131	Spatial path following scheme for a trans-humeral prosthesis. , 2017, , .		0
132	Design and Analysis of An Anthropomorphic Two-DoF Ankle-Foot Orthosis. , 2019, , .		0
133	Model predictive controllerâ€‘based spatiotemporal path tracking method for transhumeral prostheses. International Journal of Medical Robotics and Computer Assisted Surgery, 2019, 15, e1980.	1.2	0
134	ADAPTIVE FUZZY MODEL BASED PREDICTIVE CONTROL FOR A MULTI-VARIABLE HEATING SYSTEM. Control and Intelligent Systems, 2011, 39, .	0.3	0
135	Two Key-Frame State Marginalization for Computationally Efficient Visual Inertial Navigation. , 2021, , .		0