

Qing-Hao Meng

List of Publications by Year in descending order

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156
papers

1,493
citations

361045

20
h-index

433756

31
g-index

157
all docs

157
docs citations

157
times ranked

1035
citing authors

#	ARTICLE	IF	CITATIONS
1	Odor source localization using a mobile robot in outdoor airflow environments with a particle filter algorithm. <i>Autonomous Robots</i> , 2011, 30, 281-292.	3.2	170
2	Development of compact electronic noses: a review. <i>Measurement Science and Technology</i> , 2021, 32, 062002.	1.4	57
3	Improving histogram-based image contrast enhancement using gray-level information histogram with application to X-ray images. <i>Optik</i> , 2012, 123, 511-520.	1.4	49
4	Recent Progress and Trend of Robot Odor Source Localization. <i>IEEJ Transactions on Electrical and Electronic Engineering</i> , 2021, 16, 938-953.	0.8	44
5	Adapting an Ant Colony Metaphor for Multi-Robot Chemical Plume Tracing. <i>Sensors</i> , 2012, 12, 4737-4763.	2.1	43
6	Collective Odor Source Estimation and Search in Time-Variant Airflow Environments Using Mobile Robots. <i>Sensors</i> , 2011, 11, 10415-10443.	2.1	41
7	A Bioinspired Neural Network for Data Processing in an Electronic Nose. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2016, 65, 2369-2380.	2.4	41
8	Odor-induced emotion recognition based on average frequency band division of EEG signals. <i>Journal of Neuroscience Methods</i> , 2020, 334, 108599.	1.3	40
9	Adaptive extended Kalman filter (AEKF)-based mobile robot localization using sonar. <i>Robotica</i> , 2000, 18, 459-473.	1.3	36
10	Electronic nose with a new feature reduction method and a multi-linear classifier for Chinese liquor classification. <i>Review of Scientific Instruments</i> , 2014, 85, 055004.	0.6	34
11	Measurement of sheet resistance of cross microareas using a modified van der Pauw method. <i>Semiconductor Science and Technology</i> , 1996, 11, 805-811.	1.0	30
12	A Wind Estimation Method with an Unmanned Rotorcraft for Environmental Monitoring Tasks. <i>Sensors</i> , 2018, 18, 4504.	2.1	29
13	A New Method Combining KECA-LDA With ELM for Classification of Chinese Liquors Using Electronic Nose. <i>IEEE Sensors Journal</i> , 2016, 16, 8010-8017.	2.4	28
14	Improving Classification of Slow Cortical Potential Signals for BCI Systems With Polynomial Fitting and Voting Support Vector Machine. <i>IEEE Signal Processing Letters</i> , 2018, 25, 283-287.	2.1	28
15	Real-Time Noncrosstalk Sonar System by Short Optimized Pulse-Position Modulation Sequences. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2009, 58, 3442-3449.	2.4	25
16	Stacked Sparse Auto-Encoders (SSAE) Based Electronic Nose for Chinese Liquors Classification. <i>Sensors</i> , 2017, 17, 2855.	2.1	25
17	GRP-DNet: A gray recurrence plot-based densely connected convolutional network for classification of epileptiform EEG. <i>Journal of Neuroscience Methods</i> , 2021, 347, 108953.	1.3	25
18	Review of Crosstalk Elimination Methods for Ultrasonic Range Systems in Mobile Robots. , 2006, , .		24

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19	Simulate the aerodynamic olfactory effects of gas-sensitive UAVs: A numerical model and its parallel implementation. <i>Advances in Engineering Software</i> , 2016, 102, 123-133.	1.8	24
20	A Bio-Inspired Breathing Sampling Electronic Nose for Rapid Detection of Chinese Liquors. <i>IEEE Sensors Journal</i> , 2017, 17, 4689-4698.	2.4	24
21	Non-crosstalk real-time ultrasonic range system with optimized chaotic pulse position-width modulation excitation. , 2008, , .		21
22	Multivariate multifractal detrended fluctuation analysis of 3D wind field signals. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2018, 490, 513-523.	1.2	21
23	A CNN-based simplified data processing method for electronic noses. , 2017, , .		20
24	Probability-PSO Algorithm for Multi-robot Based Odor Source Localization in Ventilated Indoor Environments. <i>Lecture Notes in Computer Science</i> , 2008, , 1206-1215.	1.0	19
25	Detecting Seizures From EEG Signals Using the Entropy of Visibility Heights of Hierarchical Neighbors. <i>IEEE Access</i> , 2019, 7, 7889-7896.	2.6	18
26	Source Exploration for an Under-Actuated System: A Control-Theoretic Paradigm. <i>IEEE Transactions on Control Systems Technology</i> , 2020, 28, 1100-1107.	3.2	18
27	Neural network and fuzzy logic techniques based collision avoidance for a mobile robot. <i>Robotica</i> , 1997, 15, 627-632.	1.3	16
28	Improvement in the accuracy of estimating the time-of-flight in an ultrasonic ranging system using multiple square-root unscented Kalman filters. <i>Review of Scientific Instruments</i> , 2010, 81, 104901.	0.6	16
29	Data Processing for Multiple Electronic Noses Using Sensor Response Visualization. <i>IEEE Sensors Journal</i> , 2018, 18, 9360-9369.	2.4	16
30	Chemical Source Searching by Controlling a Wheeled Mobile Robot to Follow an Online Planned Route in Outdoor Field Environments. <i>Sensors</i> , 2019, 19, 426.	2.1	16
31	Distributed Least-Squares Estimation of a Remote Chemical Source via Convex Combination in Wireless Sensor Networks. <i>Sensors</i> , 2014, 14, 11444-11466.	2.1	14
32	An adaptive P300 model for controlling a humanoid robot with mind. , 2013, , .		13
33	Distributed Sequential Location Estimation of a Gas Source via Convex Combination in WSNs. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2016, 65, 1484-1494.	2.4	13
34	A Flying Odor Compass to Autonomously Locate the Gas Source. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2017, , 1-13.	2.4	13
35	Olfactory EEG Signal Classification Using a Trapezoid Difference-Based Electrode Sequence Hashing Approach. <i>International Journal of Neural Systems</i> , 2020, 30, 2050011.	3.2	13
36	Frequency-Hopping Pseudo-Random Pulse Width Modulation to Eliminate Crosstalk of Sonar Sensors in Mobile Robots. , 2006, , .		12

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37	A Portable Odor-Tracing Instrument. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 631-642.	2.4	12
38	Decoding olfactory EEG signals for different odor stimuli identification using wavelet-spatial domain feature. Journal of Neuroscience Methods, 2021, 363, 109355.	1.3	12
39	Using Spike-Based Bio-Inspired Olfactory Model for Data Processing in Electronic Noses. IEEE Sensors Journal, 2018, 18, 692-702.	2.4	11
40	Design of handheld electronic nose bionic chambers for Chinese liquors recognition. Measurement: Journal of the International Measurement Confederation, 2021, 172, 108856.	2.5	11
41	A Portable E-Nose Endowed With Subjective Evaluation Function of Air Quality in Vehicles. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-11.	2.4	11
42	Odometry based pose determination and errors measurement for a mobile robot with two steerable drive wheels. Journal of Intelligent and Robotic Systems: Theory and Applications, 2005, 41, 263-282.	2.0	10
43	Mobile Robot based Odor Path Estimation via Dynamic Window Approach. , 2008, , .		10
44	Mobile robot based odor source localization via particle filter. , 2009, , .		10
45	An OpenViBE-based brainwave control system for Cerebot. , 2013, , .		10
46	Temporal-spatial cross-correlation analysis of non-stationary near-surface wind speed time series. Journal of Central South University, 2017, 24, 692-698.	1.2	10
47	Design of a portable electronic nose for real-fake detection of liquors. Review of Scientific Instruments, 2017, 88, 095001.	0.6	10
48	A multiple-fan active control wind tunnel for outdoor wind speed and direction simulation. Review of Scientific Instruments, 2018, 89, 035108.	0.6	10
49	A Hand-Held Electronic Nose System for Rapid Identification of Chinese Liquors. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-11.	2.4	10
50	Unstructured Road Vanishing Point Detection Using Convolutional Neural Networks and Heatmap Regression. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-8.	2.4	10
51	Electronic nose using a bio-inspired neural network modeled on mammalian olfactory system for Chinese liquor classification. Review of Scientific Instruments, 2019, 90, 025001.	0.6	9
52	3-Dimensional Modeling and Attitude Control of Multi-Joint Autonomous Underwater Vehicles. Journal of Marine Science and Engineering, 2021, 9, 307.	1.2	9
53	Improvement of energy efficiency via spectrum optimization of excitation sequence for multichannel simultaneously triggered airborne sonar system. Review of Scientific Instruments, 2009, 80, 124903.	0.6	8
54	Research on the Effect of Electrical Signals on Growth of Sansevieria under Light-Emitting Diode (LED) Lighting Environment. PLoS ONE, 2015, 10, e0131838.	1.1	8

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55	Mobile robot gas source localization via top-down visual attention mechanism and shape analysis. , 2010, , .		7
56	SSVEP-based hierarchical architecture for control of a humanoid robot with mind. , 2014, , .		7
57	Multi-robot odor-plume tracing in indoor natural airflow environments using an improved ACO algorithm. , 2010, , .		6
58	Community structure detection in complex networks for characterizing atmospheric boundary-layer wind speed time series. , 2016, , .		6
59	2-D Wind Velocity Measurement Using a Vertically Suspended Optical Fiber Combined With a Photosensor Array. IEEE Transactions on Instrumentation and Measurement, 2017, 66, 2074-2082.	2.4	6
60	Asymmetric multiscale multifractal analysis of wind speed signals. International Journal of Modern Physics C, 2017, 28, 1750137.	0.8	6
61	An Infotaxis-based Odor Source Searching Strategy for a Mobile Robot Equipped with a TDLAS Gas Sensor. , 2019, , .		6
62	D-VPnet: A network for real-time dominant vanishing point detection in natural scenes. Neurocomputing, 2020, 417, 432-440.	3.5	6
63	Safe-Nav: learning to prevent PointGoal navigation failure in unknown environments. Complex & Intelligent Systems, 2022, 8, 2273-2290.	4.0	6
64	Touch Gesture and Emotion Recognition Using Decomposed Spatiotemporal Convolutions. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-9.	2.4	6
65	Multitask Touch Gesture and Emotion Recognition Using Multiscale Spatiotemporal Convolutions With Attention Mechanism. IEEE Sensors Journal, 2022, 22, 16190-16201.	2.4	6
66	Nonlinear analysis of the near-surface wind speed time series. , 2012, , .		5
67	Learning to Rapidly Re-Contact the Lost Plume in Chemical Plume Tracing. Sensors, 2015, 15, 7512-7536.	2.1	5
68	A Double Triangular Feature-Based Sensor Sequence Coding Approach for Identifying Chinese Liquors Using an E-Nose System. IEEE Sensors Journal, 2022, 22, 3878-3887.	2.4	5
69	A triangular hashing learning approach for olfactory EEG signal recognition. Applied Soft Computing Journal, 2022, 118, 108471.	4.1	5
70	Wall-following by an Autonomously Guided Vehicle (AGV) Using a New Fuzzy-I (Integration) Controller. Robotica, 1999, 17, 79-86.	1.3	4
71	A Novel Object Recognition Method for Mobile Robot Localizing a Single Odor/Gas Source in Complex Environments. , 2008, , .		4
72	A particle filter algorithm for odor source localization in wireless sensor network. , 2011, , .		4

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73	Distributed sequential adaptive weighted localization of a gas-leakage source using a wireless sensor network. , 2013, , .		4
74	Localization of multiple odor sources via selective olfaction and adapted ant colony optimization algorithm. , 2013, , .		4
75	A wind estimation method for quadrotors using inertial measurement units. , 2016, , .		4
76	DCCA cross-correlation analysis of 3D wind field signals in indoor and outdoor environments. , 2016, , .		4
77	A Fast Method for Chinese Liquor Recognition. , 2018, , .		4
78	Stereo Vision based Cabin's 6-dimensional Pose Measurement in Docking Process. , 2018, , .		4
79	Slow cortical potential signal classification using concave-convex feature. Journal of Neuroscience Methods, 2019, 324, 108303.	1.3	4
80	EEG-Based Odor Recognition Using Channel-Frequency Convolutional Neural Network. , 2019, , .		4
81	UAV-based Odor Source Localization in Multi-Building Environments Using Simulated Annealing Algorithm. , 2020, , .		4
82	Uncertainty-driven active view planning in feature-based monocular vSLAM. Applied Soft Computing Journal, 2021, 108, 107459.	4.1	4
83	A Novel E-Nose Chamber Design for VOCs Detection in Automobiles. , 2020, , .		4
84	Odor Evaluation of Vehicle Interior Materials Based on Portable E-nose. , 2020, , .		4
85	Odometry based pose determination and errors measurement for a mobile robot with two steerable drive wheels. , 0, , .		3
86	Integrating Perceptual Properties of the HVS into the Computational Model of Visual Attention. , 2009, , .		3
87	Correlation property analysis for the pulse position modulation sequence used for non-crosstalk sonar systems. , 2011, , .		3
88	Hearing based relative localization for mobile robots in outdoor environments. , 2012, , .		3
89	Motion capture and reconstruction based on depth information using Kinect. , 2012, , .		3
90	Multi-Sensor Integrated Navigation Algorithm Using Adaptive Federated Kalman Filter for MAVs. , 2018, , .		3

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91	An Automatic Detection and Recognition Method for Pointer-type Meters in Natural Gas Stations. , 2019, , .		3
92	Monocular Visual SLAM based on VGG Feature Point Extraction. , 2020, , .		3
93	Touch Gesture Recognition Using Spatiotemporal Fusion Features. IEEE Sensors Journal, 2022, 22, 428-437.	2.4	3
94	A Double-Square-Based Electrode Sequence Learning Method for Odor Concentration Identification Using EEG Signals. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-10.	2.4	3
95	An Aero-olfactory-Effect Elimination Algorithm for Rotor UAV based Gas Distribution Mapping. , 2020, , .		3
96	Rapid door-number recognition by a humanoid mobile robot. , 0, , .		2
97	Normalizing the polynomial-match for the non-linear signal in transducers. Sensors and Actuators A: Physical, 2005, 125, 76-83.	2.0	2
98	Rapid Door Number Recognition by a Humanoid Mobile Robot. Journal of Intelligent and Robotic Systems: Theory and Applications, 2005, 43, 33-54.	2.0	2
99	An estimation-based plume tracing method in time-variant airflow-field via mobile robot. , 2009, , .		2
100	Non-crosstalk ultrasonic ranging system excited using chaotic sine frequency modulated sequences. , 2011, , .		2
101	Numerical simulation of odor plume in indoor ventilated environments for studying odor source localization with mobile robots. , 2012, , .		2
102	Relative localization for distributed multi-robot systems via sound relaying. , 2013, , .		2
103	Simulation of Outdoor Near-Surface Airflows Based on a Wind Tunnel with Multiple Actively-Controlled Fans. Advanced Materials Research, 2013, 807-809, 102-105.	0.3	2
104	Control of a humanoid robot via N200 potentials. , 2014, , .		2
105	A numerical model to simulate the aerodynamic olfactory effect of the gas-sensitive UAV. , 2016, , .		2
106	An Olfactory Display System Integrated with Video Content Recognition. , 2018, , .		2
107	Experimental Verification of an Aerodynamic Olfactory Effect Model for the Simulation of Gas-Sensitive Rotorcrafts. , 2018, , .		2
108	A Small Bionic Sensor Chamber Designed for Hand-Held Electronic Nose. , 2018, , .		2

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109	Latticed mode: A new control strategy for wind field simulation in a multiple-fan wind tunnel. Review of Scientific Instruments, 2019, 90, 085104.	0.6	2
110	Gas Source Declaration With Tetrahedral Sensing Geometries and Median Value Filtering Extreme Learning Machine. IEEE Access, 2020, 8, 7227-7235.	2.6	2
111	Attitude Adjustment of a Multi-joint AUV Using an Improved LADRC. , 2020, , .		2
112	MASS: A Multisource Domain Adaptation Network for Cross-Subject Touch Gesture Recognition. IEEE Transactions on Industrial Informatics, 2023, 19, 3099-3108.	7.2	2
113	Multi-robot Based Chemical Plume Tracing with Virtual Odor-Source-Probability Sensor. , 2009, , .		1
114	Multi-objective Chaotic Optimization Algorithm by Combining Gray and Real Codes. , 2009, , .		1
115	Real, virtual, simulated and remote experiments for Electrical Engineering education. , 2009, , .		1
116	Determination of optimal top-down gains for specific searching tasks. , 2010, , .		1
117	Multichannel Non-Crosstalk Sonar System Modulated Using Chaotic Binary Frequency Shift Keying Sequences for Mobile Robots. , 2011, , .		1
118	Non-crosstalk ultrasonic ranging system excited using binary pseudorandom sinusoidal signals. , 2012, , .		1
119	A behavior-based architecture for multi-robot chemical source localization and its implementation with evolutionary computation. , 2015, , .		1
120	A portable E-nose system for classification of Chinese liquor. , 2015, , .		1
121	Multivariate order recurrence network for analyzing cross-correlation of the wind field and the gas concentration field. , 2016, , .		1
122	Multiscale entropy analysis of the 3D near-surface wind field. , 2016, , .		1
123	Multiscale multifractal analysis of near-surface wind speed time series. , 2016, , .		1
124	Comparison of complexity between indoor and outdoor wind speed time series. , 2016, , .		1
125	Time and frequency domain analysis to plant electrical signal of swallow palm and anthurium under controlled LED environment. , 2016, , .		1
126	Multiscale Complex Network for Analyzing the Wind Field from Different Heights and Seasons. , 2018, , .		1

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127	A Voting-Near-Extreme-Learning-Machine Classification Algorithm. , 2018, , .		1
128	Multivariate Multiscale Recurrence Network Analysis for Characterizing Near-surface 3D Wind Speed Time Series in Different Environments*. , 2018, , .		1
129	Multiscale Cross-correlation Analysis of the Near-surface Wind Signals at Different Heights. , 2018, , .		1
130	Simulation and Verification of Wing-In-Ground Aero-Olfactory Effect for the Gas-Sensitive Rotorcrafts. , 2019, , .		1
131	A gas source declaration scheme based on a tetrahedral sensor structure in three-dimensional airflow environments. Review of Scientific Instruments, 2019, 90, 024104.	0.6	1
132	A novel indoor smell regulation method. AIP Advances, 2020, 10, 105226.	0.6	1
133	Experimental Comparison of Spiral and Zigzag Algorithms for Odor Plume Finding in An Outdoor Natural Airflow Environment. The Abstracts of the International Conference on Advanced Mechatronics Toward Evolutionary Fusion of IT and Mechatronics ICAM, 2010, 2010.5, 171-176.	0.0	1
134	Haptic Interface of Mobile Robot with Delay Time via Internet. , 2005, , .		0
135	Quantifying the contribution of feature maps for goal-directed visual attention. , 2010, , .		0
136	Echo energy analysis for pulse position modulation sequences used for non-crosstalk sonar systems. , 2011, , .		0
137	Performance analysis for the ultrasonic spread spectrum ranging system excited with pulse codes. , 2012, , .		0
138	Searching for plausible gas sources using SIFT features. , 2012, , .		0
139	Image thresholding based on edge information analysis. , 2012, , .		0
140	Research on variation of the wind direction in different height levels of a ventilated room. , 2013, , .		0
141	FCE-based color image segmentation. , 2013, , .		0
142	EEG-channel selection based on difference analysis of mental activities. , 2013, , .		0
143	A novel olfactory neural network for classification of Chinese liquors using electronic nose. , 2015, , .		0
144	Noise resistance ability analysis of the visibility graph and the limited penetrable visibility graph. , 2016, , .		0

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145	Superfamilies of networks for analyzing the correlations of different flow fields. , 2016, , .		0
146	Multifractal analysis of short-term wind speed time series with different sampling frequencies. , 2016, , .		0
147	Effects of sampling frequency on magnitude and sign correlations in small-scale wind speed fluctuations. , 2016, , .		0
148	Multivariate directed weighted complex network for characterizing 3D wind speed signals in indoor and outdoor environments. , 2016, , .		0
149	Active control strategies for outdoor near-surface wind field simulation in a multiple-fan wind tunnel. , 2016, , .		0
150	Which sampling method more suitable for portable electronic noses: Classic or bio-inspired one?. , 2017, , .		0
151	Odor tracing in turbulent airflow field using only three MOX sensors. , 2017, , .		0
152	A method for single odor source declaration in three-dimensional airflow environments. , 2017, , .		0
153	Quantification Analysis of Time Series Based on 2D Visibility State Plot. , 2018, , .		0
154	A Primary and Secondary Feature Priority Classification Algorithm. , 2018, , .		0
155	Indoor Layout Estimation by Fusing Monocular RGB Image Features Extracted with HRNet. , 2020, , .		0
156	Single Gas Source Localization Using A Mobile Sensor Network. The Abstracts of the International Conference on Advanced Mechatronics Toward Evolutionary Fusion of IT and Mechatronics ICAM, 2010, 2010.5, 177-182.	0.0	0