Jan Steckel

List of Publications by Year
in descending order

73	748	623734	677142
papers	citations	14	22
		h-index	g-index
75	75	75	577
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Radial Velocity Estimation for Multiple Objects Using In-Air Sonar With MIMO Virtual Arrays. IEEE Access, 2023, 11, 16700-16710.	4.2	2
2	A Low Cost Spatial Calibration Method for Distributed Microphone Arrays. Lecture Notes in Networks and Systems, 2022, , 997-1005.	0.7	0
3	Comprehensive Analysis System for Automated Respiratory Cycle Segmentation and Crackle Peak Detection. IEEE Journal of Biomedical and Health Informatics, 2022, 26, 1847-1860.	6.3	2
4	Real-Time Sonar Fusion for Layered Navigation Controller. Sensors, 2022, 22, 3109.	3.8	1
5	AoA-Based Localization System Using a Single IoT Gateway: <i>An Application for Smart Pedestrian Crossing</i>. IEEE Access, 2021, 9, 13532-13541.	4.2	10
6	Simulation of Pulse-Echo Radar for Vehicle Control and SLAM. Sensors, 2021, 21, 523.	3.8	5
7	LoRay: AoA Estimation System for Long Range Communication Networks. IEEE Transactions on Wireless Communications, 2021, 20, 2005-2018.	9.2	22
8	AoA Estimates for LPWAN Technologies: Indoor Experimental Analysis. , 2021, , .		3
9	Predicting LiDAR Data From Sonar Images. IEEE Access, 2021, 9, 57897-57906.	4.2	9
10	LatentSLAM: unsupervised multi-sensor representation learning for localization and mapping. , 2021, , .		11
11	Beamforming Applied to Ultrasound Analysis in Detection of Bearing Defects. Sensors, 2021, 21, 6803.	3.8	7
12	Bio-acoustic tracking and localization using heterogeneous, scalable microphone arrays. Communications Biology, 2021, 4, 1275.	4.4	13
13	S2L-SLAM: Sensor Fusion Driven SLAM using Sonar, LiDAR and Deep Neural Networks. , 2021, , .		3
14	Acoustic traits of bat-pollinated flowers compared to flowers of other pollination syndromes and their echo-based classification using convolutional neural networks. PLoS Computational Biology, 2021, 17, e1009706.	3.2	12
15	Improving the Accuracy and Robustness of Ultra-Wideband Localization Through Sensor Fusion and Outlier Detection. IEEE Robotics and Automation Letters, 2020, 5, 32-39.	5.1	19
16	High-Resolution Ultrasound Sensing for Robotics Using Dense Microphone Arrays. IEEE Access, 2020, 8, 190083-190093.	4.2	12
17	RSS-based AoA Estimation System for IoT Applications using Rotman Lens. , 2020, , .		3
18	HRTF measurement by means of unsupervised head movements with respect to a single fixed speaker. IEEE Access, 2020, , 1-1.	4.2	9

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19	An Optimized Spatial Sampling Strategy for Wide-View Planar Array 3-D Sonar Sensors. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2020, 67, 1236-1241.	3.0	0
20	Bioinspired sonar reflectors as guiding beacons for autonomous navigation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 1367-1374.	7.1	10
21	ANGLE: ANGular Location Estimation Algorithms. IEEE Access, 2020, 8, 14620-14629.	4.2	14
22	Urtis: a Small 3d Imaging Sonar Sensor for Robotic Applications. , 2020, , .		3
23	AirLeakSlam: Automated Air Leak Detection. Lecture Notes in Networks and Systems, 2020, , 746-755.	0.7	1
24	In-Air Imaging Sonar Sensor Network with Real-Time Processing Using GPUs. Lecture Notes in Networks and Systems, 2020, , 716-725.	0.7	5
25	On-plate localization and mapping for an inspection robot using ultrasonic guided waves: a proof of concept. , 2020, , .		4
26	Bats Actively Use Leaves as Specular Reflectors to Detect Acoustically Camouflaged Prey. Current Biology, 2019, 29, 2731-2736.e3.	3.9	26
27	Principles of Biological Echolocation Applied to Radar Sensing: Applying Biomimetic Sensors to Achieve Autonomous Navigation. IEEE Signal Processing Magazine, 2019, 36, 98-111.	5.6	7
28	Automatic Calibration of a Six-Degrees-of-Freedom Pose Estimation System. IEEE Sensors Journal, 2019, 19, 8824-8831.	4.7	9
29	A Flexible Low-Cost Biologically Inspired Sonar Sensor Platform for Robotic Applications. , 2019, , .		3
30	eRTIS: A Fully Embedded Real Time 3D Imaging Sonar Sensor for Robotic Applications. , 2019, , .		29
31	Synchronous Wireless Body Sensor Network Enabling Human Body Pose Estimation. IEEE Access, 2019, 7, 49341-49351.	4.2	10
32	Salient Representation for Lung Sound Analysis Based on the JAMF Transform. , 2019, , .		0
33	3D Point Cloud Data Acquisition Using a Synchronized In-Air Imaging Sonar Sensor Network. , 2019, , .		6
34	AirleakSlam: Detection of Pressurized Air Leaks Using Passive Ultrasonic Sensors. , 2019, , .		0
35	Live Demonstration of eRTIS, an Embedded Real-Time Imaging Sonar Sensor. , 2019, , .		2
36	An Optimized Planar MIMO Array Approach to In-Air Synthetic Aperture Sonar. , 2019, 3, 1-4.		4

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37	Avoidance of non-localizable obstacles in echolocating bats: A robotic model. PLoS Computational Biology, 2019, 15, e1007550.	3.2	14
38	Synchronization of Multiple Independent Subarray Antennas: An Application for Angle of Arrival Estimation. IEEE Transactions on Antennas and Propagation, 2019, 67, 1223-1232.	5.1	22
39	A Biomimetic Radar System for Autonomous Navigation. IEEE Transactions on Robotics, 2019, 35, 539-548.	10.3	15
40	Low-cost synchronization of high-speed audio and video recordings in bio-acoustic experiments. Journal of Experimental Biology, 2018, 221, .	1.7	8
41	Information Theoretic Framework for the Optimization of UWB Localization Systems. , 2018, , .		6
42	Passive Acoustic Sound Source Tracking in 3D Using Distributed Microphone Arrays. , 2018, , .		3
43	Assistive Pointing Device Based on a Head-Mounted Camera. IEEE Transactions on Human-Machine Systems, 2017, 47, 590-597.	3.5	6
44	Widening the Directivity Patterns of Ultrasound Transducers Using 3-D-Printed Baffles. IEEE Sensors Journal, 2017, 17, 1454-1462.	4.7	6
45	Acoustic Flow-Based Control of a Mobile Platform Using a 3D Sonar Sensor. IEEE Sensors Journal, 2017, 17, 3131-3141.	4.7	18
46	2D angle of arrival estimations and bandwidth recognition for broadband signals. , 2017, , .		2
47	An Ultrasonic Six Degrees-of-Freedom Pose Estimation Sensor. IEEE Sensors Journal, 2017, 17, 151-159.	4.7	19
48	Adaptive probabilistic model using angle of arrival estimation for IoT indoor localization. , 2017, , .		18
49	Model-Based Physical System Deployment on Embedded Targets with Contract-Based Design. , 2017, , .		1
50	RadarSLAM: Biomimetic SLAM using ultra-wideband pulse-echo radar. , 2017, , .		14
51	Six-DoF pose estimation using dual-axis rotating laser sweeps using a probabilistic framework. , 2017, , .		4
52	Stable six-DoF head-pose tracking in assistive technology application. , 2017, , .		1
53	Live demonstration: 3D sonar sensing using low-cost MEMS arrays. , 2017, , .		2
54	Low-cost one-bit MEMS microphone arrays for in-air acoustic imaging using FPGA's. , 2017, , .		7

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55	A flexible embedded hardware platform supporting low-cost human pose estimation. , 2016, , .		3
56	Place recognition using batlike sonar. ELife, 2016, 5, .	6.0	25
57	JAMF-based representation for computational lung sound analysis. , 2015, , .		1
58	Three sources, three receivers, six degrees of freedom: An ultrasonic sensor for pose estimation & motion capture. , 2015, , .		7
59	Spatial sampling strategy for a 3D sonar sensor supporting BatSLAM. , 2015, , .		10
60	An optical head-pose tracking sensor for pointing devices using IR-LED based markers and a low-cost camera. , 2015, , .		5
61	Sonar System Combining an Emitter Array With a Sparse Receiver Array for Air-Coupled Applications. IEEE Sensors Journal, 2015, 15, 3446-3452.	4.7	24
62	Sparse decomposition of in-air sonar images for object localization. , 2014, , .		5
63	Ultrasound-based air leak detection using a random microphone array and sparse representations. , 2014, , .		9
64	Antenna arrays for RSS based indoor localization systems. , 2014, , .		4
65	Acoustic flow for robot motion control. , 2014, , .		7
66	Broadband 3-D Sonar System Using a Sparse Array for Indoor Navigation. IEEE Transactions on Robotics, 2013, 29, 161-171.	10.3	62
67	BatSLAM: Simultaneous Localization and Mapping Using Biomimetic Sonar. PLoS ONE, 2013, 8, e54076.	2.5	87
68	A sonar system using a sparse broadband 3D array for robotic applications. , 2012, , .		5
69	Biomimetic sonar for biomimetic SLAM. , 2012, , .		4
70	A novel biomimetic sonarhead using beamforming technology to mimic bat echolocation. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2012, 59, 1369-1377.	3.0	16
71	Biomimetic sonar, outer ears versus arrays. , 2011, , .		5
72	3D localization by a biomimetic sonar system in a fire-fighting application. , 2011, , .		2

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73	Information Generated by the Moving Pinnae of Rhinolophus rouxi: Tuning of the Morphology at Different Harmonics. PLoS ONE, 2011, 6, e20627.	2.5	19