

# Mingui Sun

## List of Publications by Year in descending order

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145  
papers

1,848  
citations

304368

22  
h-index

344852

36  
g-index

146  
all docs

146  
docs citations

146  
times ranked

2045  
citing authors

#	ARTICLE	IF	CITATIONS
1	Methods and datasets on semantic segmentation: A review. <i>Neurocomputing</i> , 2018, 304, 82-103.	3.5	154
2	In vitro and in vivo studies on wireless powering of medical sensors and implantable devices. , 2009, , .		95
3	Lateral and Angular Misalignments Analysis of a New PCB Circular Spiral Resonant Wireless Charger. <i>IEEE Transactions on Magnetics</i> , 2012, 48, 4522-4525.	1.2	86
4	Accuracy of food portion size estimation from digital pictures acquired by a chest-worn camera. <i>Public Health Nutrition</i> , 2014, 17, 1671-1681.	1.1	85
5	A Novel Mat-Based System for Position-Varying Wireless Power Transfer to Biomedical Implants. <i>IEEE Transactions on Magnetics</i> , 2013, 49, 4774-4779.	1.2	66
6	Single image dehazing using the change of detail prior. <i>Neurocomputing</i> , 2015, 156, 1-11.	3.5	62
7	Automatic food detection in egocentric images using artificial intelligence technology. <i>Public Health Nutrition</i> , 2019, 22, 1-12.	1.1	62
8	Characterization of sleep spindles using higher order statistics and spectra. <i>IEEE Transactions on Biomedical Engineering</i> , 2000, 47, 997-1009.	2.5	46
9	Magnetic Hand Tracking for Human-Computer Interface. <i>IEEE Transactions on Magnetics</i> , 2011, 47, 970-973.	1.2	45
10	ARCH: Adaptive recurrent-convolutional hybrid networks for long-term action recognition. <i>Neurocomputing</i> , 2016, 178, 87-102.	3.5	44
11	Imaged based estimation of food volume using circular referents in dietary assessment. <i>Journal of Food Engineering</i> , 2012, 109, 76-86.	2.7	43
12	A Robust RGB-D SLAM System With Points and Lines for Low Texture Indoor Environments. <i>IEEE Sensors Journal</i> , 2019, 19, 9908-9920.	2.4	43
13	An Exploratory Study on a Chest-Worn Computer for Evaluation of Diet, Physical Activity and Lifestyle. <i>Journal of Healthcare Engineering</i> , 2015, 6, 1-22.	1.1	42
14	Triboelectric Nanogenerator Using Microdome-Patterned PDMS as a Wearable Respiratory Energy Harvester. <i>Advanced Materials Technologies</i> , 2017, 2, 1700014.	3.0	38
15	Batteries Not Included: A Mat-Based Wireless Power Transfer System for Implantable Medical Devices As a Moving Target. <i>IEEE Microwave Magazine</i> , 2013, 14, 63-72.	0.7	37
16	Data communication between brain implants and computer. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2003, 11, 189-192.	2.7	36
17	Analysis of Wireless Energy Transmission for Implantable Device Based on Coupled Magnetic Resonance. <i>IEEE Transactions on Magnetics</i> , 2012, 48, 723-726.	1.2	35
18	Fast single image haze removal via local atmospheric light veil estimation. <i>Computers and Electrical Engineering</i> , 2015, 46, 371-383.	3.0	32

#	ARTICLE	IF	CITATIONS
19	Standard Plane Identification in Fetal Brain Ultrasound Scans Using a Differential Convolutional Neural Network. IEEE Access, 2020, 8, 83821-83830.	2.6	30
20	Healthcare Engineering Defined: A White Paper. Journal of Healthcare Engineering, 2015, 6, 635-648.	1.1	29
21	Robust Robot Pose Estimation for Challenging Scenes With an RGB-D Camera. IEEE Sensors Journal, 2019, 19, 2217-2229.	2.4	26
22	Deep learning for classification of normal swallows in adults. Neurocomputing, 2018, 285, 1-9.	3.5	25
23	Deep Learning-Based Methodology for Recognition of Fetal Brain Standard Scan Planes in 2D Ultrasound Images. IEEE Access, 2020, 8, 44443-44451.	2.6	25
24	A fast color image enhancement algorithm based on Max Intensity Channel. Journal of Modern Optics, 2014, 61, 466-477.	0.6	24
25	NDNet: Narrow While Deep Network for Real-Time Semantic Segmentation. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 5508-5519.	4.7	24
26	3D/2D model-to-image registration for quantitative dietary assessment. , 2012, 2012, 95-96.		22
27	Obstacle Classification and 3D Measurement in Unstructured Environments Based on ToF Cameras. Sensors, 2014, 14, 10753-10782.	2.1	22
28	Optimal Design of Planar Spiral Coil for Uniform Magnetic Field to Wirelessly Power Position-Free Targets. IEEE Transactions on Magnetics, 2021, 57, 1-9.	1.2	22
29	Saliency-aware food image segmentation for personal dietary assessment using a wearable computer. Measurement Science and Technology, 2015, 26, 025702.	1.4	20
30	Position paper on the need for portion size education and a standardised unit of measurement. Health Promotion Journal of Australia, 2017, 28, 260-263.	0.6	20
31	Wireless power delivery for wearable sensors and implants in Body Sensor Networks. , 2010, 2010, 692-5.		19
32	Designing a wearable computer for lifestyle evaluation. , 2012, 2012, 93-94.		17
33	Image-based food portion size estimation using a smartphone without a fiducial marker. Public Health Nutrition, 2019, 22, 1-13.	1.1	17
34	Study and Experimental Verification of a Rectangular Printed-Circuit-Board Wireless Transfer System for Low Power Devices. IEEE Transactions on Magnetics, 2012, 48, 3013-3016.	1.2	16
35	Magnetic shielding structure optimization design for wireless power transmission coil. AIP Advances, 2017, 7, .	0.6	15
36	Development and Validation of an Objective, Passive Dietary Assessment Method for Estimating Food and Nutrient Intake in Households in Low- and Middle-Income Countries: A Study Protocol. Current Developments in Nutrition, 2020, 4, nzaa020.	0.1	15

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37	EEG source localization: A neural network approach. <i>Neurological Research</i> , 2001, 23, 457-464.	0.6	14
38	Wireless energy delivery and data communication for biomedical sensors and implantable devices. , 2009, , .		14
39	Simultaneous wireless power transfer and data communication using synchronous pulse-controlled load modulation. <i>Measurement: Journal of the International Measurement Confederation</i> , 2017, 109, 316-325.	2.5	14
40	Pressure Ulcer Monitoring Platform—A Prospective, Human Subject Clinical Study to Validate Patient Repositioning Monitoring Device to Prevent Pressure Ulcers. <i>Advances in Wound Care</i> , 2020, 9, 28-33.	2.6	13
41	A comparative study of two biorthogonal wavelet transforms in time series prediction. , 0, , .		12
42	Extraction and Analysis of Early Ictal Activity in Subdural Electroencephalogram. <i>Annals of Biomedical Engineering</i> , 2001, 29, 878-886.	1.3	12
43	FEM Simulations and Experiments for the Advanced Witricity Charger With Compound Nano-TiO <sub>2</sub> Interlayers. <i>IEEE Transactions on Magnetics</i> , 2011, 47, 4449-4452.	1.2	12
44	A Hierarchical Deep Fusion Framework for Egocentric Activity Recognition Using a Wearable Hybrid Sensor System. <i>Sensors</i> , 2019, 19, 546.	2.1	12
45	Human-Mimetic Estimation of Food Volume from a Single-View RGB Image Using an AI System. <i>Electronics (Switzerland)</i> , 2021, 10, 1556.	1.8	12
46	How to Pass Information and Deliver Energy to a Network of Implantable Devices within the Human Body. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2007, 5286-9.	0.5	11
47	Wireless power transfer system design for implanted and worn devices. , 2009, , .		10
48	A multi-scale retinex implementation on FPGA for an outdoor application. , 2011, , .		10
49	A multisource fusion framework driven by user-defined knowledge for egocentric activity recognition. <i>Eurasip Journal on Advances in Signal Processing</i> , 2019, 2019, 14.	1.0	10
50	A matched dual-tree wavelet denoising for tri-axial swallowing vibrations. <i>Biomedical Signal Processing and Control</i> , 2016, 27, 112-121.	3.5	9
51	A lossless compression algorithm for multichannel EEG. , 0, , .		8
52	Design and Analysis of a Shoe-Embedded Power Harvester Based on Magnetic Gear. <i>IEEE Transactions on Magnetics</i> , 2016, 52, 1-4.	1.2	8
53	Reliability and validity of food portion size estimation from images using manual flexible digital virtual meshes. <i>Public Health Nutrition</i> , 2019, 22, 1-7.	1.1	8
54	A Novel Approach to Dining Bowl Reconstruction for Image-Based Food Volume Estimation. <i>Sensors</i> , 2022, 22, 1493.	2.1	8

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55	Portable amplifier design for a novel EEG monitor in point-of-care applications. , 2012, 2012, 388-389.		7
56	Rate of Information Transmission in Human Manual Control of an Unstable System. IEEE Transactions on Human-Machine Systems, 2013, 43, 259-263.	2.5	7
57	Locally Shared Features: An Efficient Alternative to Conditional Random Field for Semantic Segmentation. IEEE Access, 2019, 7, 2263-2272.	2.6	7
58	An automatic electronic instrument for accurate measurements of food volume and density. Public Health Nutrition, 2021, 24, 1248-1255.	1.1	7
59	Dual-Functional Wireless Power Transfer and Data Communication Design for Micromedical Implants. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 6259-6271.	3.7	7
60	Comparison of Orthogonal Search and Canonical Variate Analysis for the Identification of Neurobiological Systems. Annals of Biomedical Engineering, 1999, 27, 592-606.	1.3	6
61	Optimal design of energy transmission system for implantable device base on WiTricity. , 2010, , .		6
62	A novel resonant inductive magnetic coupling wireless charger with TiO <sub>2</sub> compound interlayer. Journal of Applied Physics, 2011, 109, 07E502.	1.1	6
63	Reuse of WiFi Information for Indoor Monitoring of the Elderly. , 2016, , .		6
64	Position and Angular Misalignment Analysis for Implantable Wireless Power Transfer System Based on Magnetic Resonance. Journal of Medical and Biological Engineering, 2017, 37, 602-611.	1.0	6
65	A polygonal double-layer coil design for high-efficiency wireless power transfer. AIP Advances, 2018, 8, .	0.6	6
66	Detecting Load Resistance and Mutual Inductance in Series-Parallel Compensated Wireless Power Transfer System Based on Input-Side Measurement. International Journal of Antennas and Propagation, 2018, 2018, 1-6.	0.7	6
67	Analytical study and corresponding experiments for a new resonant magnetic charger with circular spiral coils. Journal of Applied Physics, 2012, 111, 07E704.	1.1	5
68	Eating Event Detection by Magnetic Proximity Sensing. , 2013, 2013, 15-16.		5
69	Characteristics of skin-electrode impedance for a novel screw electrode. , 2014, 2014, 1-2.		5
70	A simulation study on a single-unit wireless EEG Sensor. , 2015, 2015, .		5
71	An auxiliary gaze point estimation method based on facial normal. Pattern Analysis and Applications, 2016, 19, 611-620.	3.1	5
72	Study of resonant self-charging rats experiment playground based on Witricity technology. International Journal of Applied Electromagnetics and Mechanics, 2017, 53, 409-421.	0.3	5

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73	A miniature implantable coil that can be wrapped around a tubular organ within the human body. AIP Advances, 2018, 8, 056629.	0.6	5
74	Food/Non-Food Classification of Real-Life Egocentric Images in Low- and Middle-Income Countries Based on Image Tagging Features. Frontiers in Artificial Intelligence, 2021, 4, 644712.	2.0	5
75	Biofuel cells as a possible power source for implantable electronic devices. , 0, , .		4
76	Finite element analysis and corresponding experiments of resonant energy transmission for wireless transmission devices using vitricity. , 2010, , .		4
77	Segmentation for efficient browsing of chronical video recorded by a wearable device. , 2010, , .		4
78	Anthropometric measurements from multi-view images. , 2012, , .		4
79	A low power, parallel wearable multi-sensor system for human activity evaluation. , 2015, 2015, .		4
80	A double-helix and cross-patterned solenoid used as a wirelessly powered receiver for medical implants. AIP Advances, 2018, 8, .	0.6	4
81	A hierarchical decision module based on multiple neural networks. , 0, , .		3
82	A multimedia system for remote neurosurgical monitoring. , 0, , .		3
83	A prototype volume conduction platform for implantable devices. , 2007, , .		3
84	Automatic video analysis and motion estimation for physical activity classification. , 2010, , .		3
85	The design and realization of a wearable embedded device for dietary and physical activity monitoring. , 2010, , .		3
86	Registration and fusion for ToF camera and 2D camera reading. , 2013, , .		3
87	Multiview stereo and silhouette fusion via minimizing generalized reprojection error. Image and Vision Computing, 2015, 33, 1-14.	2.7	3
88	Study on windage yaw calculation and real-time warning method of Shanxi power grid considering microclimate and micro-terrain factors. IEEJ Transactions on Electrical and Electronic Engineering, 2018, 13, 681-688.	0.8	3
89	Characterization of heart rate dynamics in infants as a probe for neural state and age. , 0, , .		2
90	A two-step method for compression of medical monitoring video. , 0, , .		2

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91	A Novel Architecture for the Design of Prosthetic and Robotic Hands. , 0, , .		2
92	Design of a phantom head for the in vitro testing of implantable devices. , 2007, , .		2
93	Carried Load Measurement Based on Gait Analysis and Human Kinetics. , 2008, , .		2
94	A comparative study between witrlicity and traditional inductive coupling in wireless energy transmission. , 2010, , .		2
95	Discrete Prolate Spheroidal Sequences for compressive sensing of EEG signals. , 2010, , .		2
96	A novel binocular vision system for wearable devices. , 2014, 2014, 1-3.		2
97	A FPGA implementation of JPEG baseline encoder for wearable devices. , 2015, 2015, .		2
98	Human-robot symbiosis framework on exoskeleton devices. , 2016, , .		2
99	Visualization of electrical field of electrode using voltage-controlled fluorescence release. Computers in Biology and Medicine, 2016, 75, 38-44.	3.9	2
100	Methodology for Objective, Passive, Image- and Sensor-based Assessment of Dietary Intake, Meal-timing, and Food-related Activity in Ghana and Kenya (P13-028-19). Current Developments in Nutrition, 2019, 3, nzz036.P13-028-19.	0.1	2
101	An adaptive neural network in wavelet space for time-series prediction. , 0, , .		1
102	Extension of a training set for artificial neural networks and its application to brain source localization. , 0, , .		1
103	Model order selection of a fuzzy logic system. , 0, , .		1
104	Application of the lifting scheme to efficient transmission of physiological data for remote display. , 0, , .		1
105	Fast Internet transmission of physiological signals using the lifting scheme and SPIHT coding algorithm. , 0, , .		1
106	Solving partial differential equations in real-time using artificial neural network signal processing as an alternative to finite-element analysis. , 2003, , .		1
107	Switching modulation for wireless transmission of biological waveforms using a cellphone. , 0, , .		1
108	POCS superresolution image reconstruction using wavelet transform. , 0, , .		1

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109	Multi-channel video for patient monitoring based on dct compositing. , 0, , .		1
110	Computer Simulation of Volume Conduction Based Data Communication Channel for Neuroprosthetic Devices. , 0, , .		1
111	Signal Multiplexing and Modulation for Volume Conduction Communication. , 0, , .		1
112	Decomposition of MEG signals with sparse representations. , 2007, , .		1
113	A wavelet transform based POCS Superresolution algorithm. Journal of Electronics, 2007, 24, 642-648.	0.2	1
114	Automatic detection of dining plates in digital video. , 2010, , .		1
115	Study on the Feasibility to Detect Cancer Tumors by Combining Nanotechnology With SQUID. IEEE Transactions on Applied Superconductivity, 2010, 20, 1956-1959.	1.1	1
116	Magnetic hand tracking for human-computer interface. , 2010, , .		1
117	Blur detection in image sequences recorded by a wearable camera. , 2011, , .		1
118	Stereo Matching with Global Edge Constraint and Occlusion Handling. , 2012, , .		1
119	An energy-based free boundary asynchronous diffusion model for 3D warping of tissue dynamics. Journal of Statistical Computation and Simulation, 2014, 84, 1280-1296.	0.7	1
120	Cross-Trees for Stereo Matching with Priors. , 2014, , .		1
121	SIFT-based indoor localization for older adults using wearable camera. , 2015, 2015, .		1
122	Estimating Dining Plate Size From an Egocentric Image Sequence Without a Fiducial Marker. Frontiers in Nutrition, 2020, 7, 519444.	1.6	1
123	Feasibility of the automatic ingestion monitor (AIM-2) for infant feeding assessment: a pilot study among breast-feeding mothers from Ghana. Public Health Nutrition, 2022, 25, 2897-2907.	1.1	1
124	On divided neural network and its application to source localization in the brain. , 0, , .		0
125	A novel model for source localization on neural substrates. , 0, , .		0
126	Analyzing EEG scalp current density using the Hjorth estimator. , 0, , .		0



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127	Analysis of heart rate changes associated with ictal activity. , 0, , .		0
128	Variable sampling of large-array EEG and MEG. , 0, , .		0
129	Data Integration for Medical Information Management. Journal of Signal Processing Systems, 2005, 41, 319-328.	1.0	0
130	3D Multiwavelet-based Motion Residual Compression for Neurosurgical Monitoring Videos. , 2005, , .		0
131	Object-Based Video Representation for Remote Patient Monitoring. , 0, , .		0
132	Coupling and compensation analysis of transcutaneous Energy Transmission for implantable artificial heart. , 2009, , .		0
133	Generation of plasma jet and its application to medical sterilization. , 2009, , .		0
134	Signal pre-processing method suitable for compressive sensing based on frequency modulation. , 2010, , .		0
135	Error analysis of a dimension estimation approach. , 2010, , .		0
136	Design of a Wireless EEG System for Point-of-Care Applications. , 2013, 2013, 78-79.		0
137	Multiresolution Image Analysis for Automatic Quantification of Collagen Gel Contraction. , 2013, , .		0
138	Mastering human-robot interaction control techniques using Chinese Tai Chi Chuan: Mutual learning, intention detection, impedance adaptation, and force borrowing. , 2015, , .		0
139	Assessing physical performance in free-living older adults with a wearable computer. , 2015, 2015, .		0
140	A hierarchical parallel fusion framework for egocentric ADL recognition based on discernment frame partitioning and belief coarsening. Journal of Ambient Intelligence and Humanized Computing, 2021, 12, 1693-1715.	3.3	0
141	Design of the next-generation medical implants with communication energy and ports. Studies in Health Technology and Informatics, 2007, 125, 457-9.	0.2	0
142	Beamspace Magnetoencephalographic Signal Decomposition in Spherical Harmonics Domain. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
143	Spike Separation from EEG/MEG Data Using Morphological Filter and Wavelet Transform. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
144	Optimal Feature Selection for Seizure Detection: A Subspace Based Approach. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0

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145	Serotonin (5-HT) released by activated white blood cells in a biological fuel cell provide a potential energy source for electricity generation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0