

Mingui Sun

List of Publications by Year in descending order

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Version: 2024-02-01

145
papers

1,848
citations

304743

22
h-index

345221

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. | 5.9 | 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. | 2.1 | 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. | 2.2 | 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. | 2.1 | 66 |
| 6 | Single image dehazing using the change of detail prior. <i>Neurocomputing</i> , 2015, 156, 1-11. | 5.9 | 62 |
| 7 | Automatic food detection in egocentric images using artificial intelligence technology. <i>Public Health Nutrition</i> , 2019, 22, 1-12. | 2.2 | 62 |
| 8 | Characterization of sleep spindles using higher order statistics and spectra. <i>IEEE Transactions on Biomedical Engineering</i> , 2000, 47, 997-1009. | 4.2 | 46 |
| 9 | Magnetic Hand Tracking for Human-Computer Interface. <i>IEEE Transactions on Magnetics</i> , 2011, 47, 970-973. | 2.1 | 45 |
| 10 | ARCH: Adaptive recurrent-convolutional hybrid networks for long-term action recognition. <i>Neurocomputing</i> , 2016, 178, 87-102. | 5.9 | 44 |
| 11 | Imaged based estimation of food volume using circular referents in dietary assessment. <i>Journal of Food Engineering</i> , 2012, 109, 76-86. | 5.2 | 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. | 4.7 | 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. | 1.9 | 42 |
| 14 | Triboelectric Nanogenerator Using Microdome-Patterned PDMS as a Wearable Respiratory Energy Harvester. <i>Advanced Materials Technologies</i> , 2017, 2, 1700014. | 5.8 | 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. | 0.8 | 37 |
| 16 | Data communication between brain implants and computer. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2003, 11, 189-192. | 4.9 | 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. | 2.1 | 35 |
| 18 | Fast single image haze removal via local atmospheric light veil estimation. <i>Computers and Electrical Engineering</i> , 2015, 46, 371-383. | 4.8 | 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. | 4.2 | 30 |
| 20 | Healthcare Engineering Defined: A White Paper. Journal of Healthcare Engineering, 2015, 6, 635-648. | 1.9 | 29 |
| 21 | Robust Robot Pose Estimation for Challenging Scenes With an RGB-D Camera. IEEE Sensors Journal, 2019, 19, 2217-2229. | 4.7 | 26 |
| 22 | Deep learning for classification of normal swallows in adults. Neurocomputing, 2018, 285, 1-9. | 5.9 | 25 |
| 23 | Deep Learning-Based Methodology for Recognition of Fetal Brain Standard Scan Planes in 2D Ultrasound Images. IEEE Access, 2020, 8, 44443-44451. | 4.2 | 25 |
| 24 | A fast color image enhancement algorithm based on Max Intensity Channel. Journal of Modern Optics, 2014, 61, 466-477. | 1.3 | 24 |
| 25 | NDNet: Narrow While Deep Network for Real-Time Semantic Segmentation. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 5508-5519. | 8.0 | 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. | 3.8 | 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. | 2.1 | 22 |
| 29 | Saliency-aware food image segmentation for personal dietary assessment using a wearable computer. Measurement Science and Technology, 2015, 26, 025702. | 2.6 | 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. | 1.2 | 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. | 2.2 | 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. | 2.1 | 16 |
| 35 | Magnetic shielding structure optimization design for wireless power transmission coil. AIP Advances, 2017, 7, . | 1.3 | 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. | 0.3 | 15 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | EEG source localization: A neural network approach. <i>Neurological Research</i> , 2001, 23, 457-464. | 1.3 | 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. | 5.0 | 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. | 5.1 | 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. | 2.5 | 12 |
| 43 | FEM Simulations and Experiments for the Advanced Witricity Charger With Compound Nano-TiO ₂ Interlayers. <i>IEEE Transactions on Magnetics</i> , 2011, 47, 4449-4452. | 2.1 | 12 |
| 44 | A Hierarchical Deep Fusion Framework for Egocentric Activity Recognition Using a Wearable Hybrid Sensor System. <i>Sensors</i> , 2019, 19, 546. | 3.8 | 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. | 3.1 | 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. | 1.7 | 10 |
| 50 | A matched dual-tree wavelet denoising for tri-axial swallowing vibrations. <i>Biomedical Signal Processing and Control</i> , 2016, 27, 112-121. | 5.7 | 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. | 2.1 | 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. | 2.2 | 8 |
| 54 | A Novel Approach to Dining Bowl Reconstruction for Image-Based Food Volume Estimation. <i>Sensors</i> , 2022, 22, 1493. | 3.8 | 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. | 3.5 | 7 |
| 57 | Locally Shared Features: An Efficient Alternative to Conditional Random Field for Semantic Segmentation. IEEE Access, 2019, 7, 2263-2272. | 4.2 | 7 |
| 58 | An automatic electronic instrument for accurate measurements of food volume and density. Public Health Nutrition, 2021, 24, 1248-1255. | 2.2 | 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. | 5.4 | 7 |
| 60 | Comparison of Orthogonal Search and Canonical Variate Analysis for the Identification of Neurobiological Systems. Annals of Biomedical Engineering, 1999, 27, 592-606. | 2.5 | 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 ₂ compound interlayer. Journal of Applied Physics, 2011, 109, 07E502. | 2.5 | 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. | 1.8 | 6 |
| 65 | A polygonal double-layer coil design for high-efficiency wireless power transfer. AIP Advances, 2018, 8, . | 1.3 | 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. | 1.2 | 6 |
| 67 | Analytical study and corresponding experiments for a new resonant magnetic charger with circular spiral coils. Journal of Applied Physics, 2012, 111, 07E704. | 2.5 | 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. | 4.6 | 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. | 0.6 | 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. | 1.3 | 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. | 3.4 | 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, . | 1.3 | 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. | 4.5 | 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. | 1.4 | 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 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 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. | 7.0 | 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. | 0.3 | 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 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 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. | 1.7 | 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. | 1.2 | 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. | 3.7 | 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. | 2.2 | 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 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 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. | 4.9 | 0 |
| 141 | Design of the next-generation medical implants with communication energy and ports. Studies in Health Technology and Informatics, 2007, 125, 457-9. | 0.3 | 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 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 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 |