Jiann-Shing Shieh

List of Publications by Year
in descending order

121 papers	3,155 citations	201385 27 h-index	182168 51 g-index
121 all docs	121 docs citations	121 times ranked	3066 citing authors

#	Article	IF	Citations
1	The micro-electro-mechanical systems (MEMS) gas sensor with bilayer SnO2/WO3 films for ammonia detection. Microsystem Technologies, 2022, 28, 287-293.	1.2	2
2	Development of an E-nose system using machine learning methods to predict ventilator-associated pneumonia. Microsystem Technologies, 2022, 28, 341-351.	1.2	15
3	Automatic control of anesthesia via different vital signs. , 2022, , 33-41.		0
4	ECG Recurrence Plot-Based Arrhythmia Classification Using Two-Dimensional Deep Residual CNN Features. Sensors, 2022, 22, 1660.	2.1	23
5	Special Issue â€œAdvanced Signal Processing in Wearable Sensors for Health Monitoringâ€. Sensors, 2022, 22, 2189.	2.1	0
6	Nonlinear Analysis of Electroencephalogram Variability as a Measure of the Depth of Anesthesia. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-13.	2.4	3
7	Anticonvulsive and Neuroprotective Effects of Eupafolin in Rats Are Associated with the Inhibition of Glutamate Overexcitation and Upregulation of the Wnt/Î²-Catenin Signaling Pathway. ACS Chemical Neuroscience, 2022, 13, 1594-1603.	1.7	7
8	Explainable AI (XAI) Applied in Machine Learning for Pain Modeling: A Review. Technologies, 2022, 10, 74.	3.0	9
9	ECG arrhythmia classification by using a recurrence plot and convolutional neural network. Biomedical Signal Processing and Control, 2021, 64, 102262.	3.5	103
10	Applying deep learning to defect detection in printed circuit boards via a newest model of you-only-look-once. Mathematical Biosciences and Engineering, 2021, 18, 4411-4428.	1.0	49
11	Pain and Stress Detection Using Wearable Sensors and Devicesâ€"A Review. Sensors, 2021, 21, 1030.	2.1	84
12	Electroencephalography complexity in infantile spasms and its association with treatment response. Clinical Neurophysiology, 2021, 132, 480-486.	0.7	12
13	Phorbol myristate acetate induces differentiation of THP-1Âcells in a nitric oxide-dependent manner. Nitric Oxide - Biology and Chemistry, 2021, 109-110, 33-41.	1.2	11
14	Deep learning via ECG and PPG signals for prediction of depth of anesthesia. Biomedical Signal Processing and Control, 2021, 68, 102663.	3.5	17
15	Non-Invasive Hemodynamics Monitoring System Based on Electrocardiography via Deep Convolutional Autoencoder. Sensors, 2021, 21, 6264.	2.1	5
16	Depth of anesthesia prediction via EEG signals using convolutional neural network and ensemble empirical mode decomposition. Mathematical Biosciences and Engineering, 2021, 18, 5047-5068.	1.0	8
17	Electroencephalogram variability analysis for monitoring depth of anesthesia. Journal of Neural Engineering, 2021, 18, .	1.8	5
18	Unsupervised Anomaly Detection in Printed Circuit Boards through Studentâ€"Teacher Feature Pyramid Matching. Electronics (Switzerland), 2021, 10, 3177.	1.8	8

#	Article	IF	Citations
19	Machine Learning Analysis of Heart Rate Variability for the Detection of Seizures in Comatose Cardiac Arrest Survivors. IEEE Access, 2020, 8, 160515-160525.	2.6	7
20	Higher Resolution Input Image of Convolutional Neural Network of Reinforced Concrete Earthquake-Generated Crack Classification and Localization. IOP Conference Series: Materials Science and Engineering, 2020, 931, 012005.	0.3	1
21	An Optimized Type-2 Self-Organizing Fuzzy Logic Controller Applied in Anesthesia for Propofol Dosing to Regulate BIS. IEEE Transactions on Fuzzy Systems, 2020, 28, 1062-1072.	6.5	19
22	Genetic Deep Convolutional Autoencoder Applied for Generative Continuous Arterial Blood Pressure via Photoplethysmography. Sensors, 2020, 20, 3829.	2.1	23
23	Nicardipine Inhibits Priming of the NLRP3 Inflammasome via Suppressing LPS-Induced TLR4 Expression. Inflammation, 2020, 43, 1375-1386.	1.7	13
24	A novel mechanical chest compressor with rapid deployment in all population cardiopulmonary resuscitation. Scientific Reports, 2020, 10, 6099.	1.6	3
25	Special Issue â€œAdvanced Signal Processing in Intelligent Systems for Health Monitoringâ€. Sensors, 2019, 19, 4727.	2.1	1
26	Integrations between Autonomous Systems and Modern Computing Techniques: A Mini Review. Sensors, 2019, 19, 3897.	2.1	10
27	Machine Learning Methods Applied to Predict Ventilator-Associated Pneumonia with Pseudomonas aeruginosa Infection via Sensor Array of Electronic Nose in Intensive Care Unit. Sensors, 2019, 19, 1866.	2.1	36
28	Spectrum Analysis of EEG Signals Using CNN to Model Patientâ€™s Consciousness Level Based on Anesthesiologistsâ€™ Experience. IEEE Access, 2019, 7, 53731-53742.	2.6	43
29	Computational Fluid Dynamics Based Fuzzy Control Optimization of Heat Exchanger via Genetic Algorithm. , 2019, , .		0
30	An Adaptive Monitoring Scheme for Automatic Control of Anaesthesia in dynamic surgical environments based on Bispectral Index and Blood Pressure. Journal of Medical Systems, 2018, 42, 95.	2.2	12
31	Detecting Defects in PCB using Deep Learning via Convolution Neural Networks. , 2018, , .		13
32	An Interval Type-2 Fuzzy Logic System for Stock Index Forecasting Based on Fuzzy Time Series and a Fuzzy Logical Relationship Map. IEEE Access, 2018, 6, 69107-69119.	2.6	25
33	Ensemble Genetic Fuzzy Neuro Model Applied for the Emergency Medical Service via Unbalanced Data Evaluation. Symmetry, 2018, 10, 71.	1.1	10
34	Design and Evaluation of a Real Time Physiological Signals Acquisition System Implemented in Multi-Operating Rooms for Anesthesia. Journal of Medical Systems, 2018, 42, 148.	2.2	9
35	Impact of Supratentorial Cerebral Hemorrhage on the Complexity of Heart Rate Variability in Acute Stroke. Scientific Reports, 2018, 8, 11473.	1.6	14
36	Electroencephalogram Similarity Analysis Using Temporal and Spectral Dynamics Analysis for Propofol and Desflurane Induced Unconsciousness. Symmetry, 2018, 10, 15.	1.1	4

#	Article	IF	Citations
37	Frontal EEG Temporal and Spectral Dynamics Similarity Analysis between Propofol and Desflurane Induced Anesthesia Using Hilbert-Huang Transform. BioMed Research International, 2018, 2018, 1-16.	0.9	10
38	Sample entropy analysis for the estimating depth of anaesthesia through human EEG signal at different levels of unconsciousness during surgeries. PeerJ, 2018, 6, e4817.	0.9	60
39	The long-term effect of bundle care for catheter-related blood stream infection: 5-year follow-up. Postgraduate Medical Journal, 2017, 93, 133-137.	0.9	6
40	Quasi-Periodicities Detection Using Phase-Rectified Signal Averaging in EEG Signals as a Depth of Anesthesia Monitor. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1773-1784.	2.7	27
41	Identification of Atrial Fibrillation by Quantitative Analyses of Fingertip Photoplethysmogram. Scientific Reports, 2017, 7, 45644.	1.6	51
42	Improved spectrum analysis in EEG for measure of depth of anesthesia based on phase-rectified signal averaging. Physiological Measurement, 2017, 38, 116-138.	1.2	13
43	EEG artifacts reduction by multivariate empirical mode decomposition and multiscale entropy for monitoring depth of anaesthesia during surgery. Medical and Biological Engineering and Computing, 2017, 55, 1435-1450.	1.6	20
44	Nonlinear analyses applied in cerebral autoregulation and blood flow changes in patients with acute intracerebral hemorrhage. Biomedical Signal Processing and Control, 2017, 31, 102-107.	3.5	7
45	Arrhythmia Evaluation in Wearable ECG Devices. Sensors, 2017, 17, 2445.	2.1	37
46	The Potential Application of Multiscale Entropy Analysis of Electroencephalography in Children with Neurological and Neuropsychiatric Disorders. Entropy, 2017, 19, 428.	1.1	16
47	Altered resting-state EEG complexity in children with Tourette syndrome: A preliminary study.. Neuropsychology, 2017, 31, 395-402.	1.0	21
48	HRV-derived data similarity and distribution index based on ensemble neural network for measuring depth of anaesthesia. PeerJ, 2017, 5, e4067.	0.9	10
49	Cardiopulmonary Resuscitation Pattern Evaluation Based on Ensemble Empirical Mode Decomposition Filter via Nonlinear Approaches. BioMed Research International, 2016, 2016, 1-6.	0.9	0
50	Continuous Monitoring of the Complexity of Intracranial Pressure After Head Injury. Acta Neurochirurgica Supplementum, 2016, 122, 33-35.	0.5	5
51	Applied a Multi-scale Entropy Algorithm to Analyze Dynamic COP Signal via Accelerometer Sensor. , 2016, , .		1
52	Predicting the percentage of atrial fibrillation using sample entropy. , 2016, , .		0
53	Ensemble empirical mode decomposition applied for PPG motion artifact. , 2016, , .		3
54	Intermittent blood pressure prediction via multiscale entropy and ensemble artificial neural networks. , 2016, , .		5

#	Article	IF	Citations
55	A simple method for walking posture analysis using accelerometers. , 2016, , .		1
56	Heart Rate Variability Signal Features for Emotion Recognition by Using Principal Component Analysis and Support Vectors Machine. , 2016, , .		66
57	Analyzing heart rate variability using a photoplethysmographic signal measuring system. , 2016, , .		0
58	A modular integrating algorithm for multiple arrhythmia detection. , 2016, , .		0
59	3D printed prosthetic hands. , 2016, , .		4
60	A comparison of five different algorithms for EEG signal analysis in artifacts rejection for monitoring depth of anesthesia. Biomedical Signal Processing and Control, 2016, 25, 24-34.	3.5	24
61	Type-2 fuzzy sets applied to multivariable self-organizing fuzzy logic controllers for regulating anesthesia. Applied Soft Computing Journal, 2016, 38, 872-889.	4.1	36
62	An effective algorithm for dynamic pedometer calculation. , 2015, , .		3
63	Complexity of Heart Rate Variability Can Predict Stroke-In-Evolution in Acute Ischemic Stroke Patients. Scientific Reports, 2015, 5, 17552.	1.6	48
64	Ensemble artificial neural networks applied to predict the key risk factors of hip bone fracture for elders. Biomedical Signal Processing and Control, 2015, 21, 146-156.	3.5	28
65	Healthcare Engineering Defined: A White Paper. Journal of Healthcare Engineering, 2015, 6, 635-648.	1.1	29
66	Multiscale Entropy of Electroencephalogram as a Potential Predictor for the Prognosis of Neonatal Seizures. PLoS ONE, 2015, 10, e0144732.	1.1	36
67	Sample Entropy Analysis of EEG Signals via Artificial Neural Networks to Model Patientsâ€™ Consciousness Level Based on Anesthesiologists Experience. BioMed Research International, 2015, 2015, 1-8.	0.9	40
68	Computational Depth of Anesthesia via Multiple Vital Signs Based on Artificial Neural Networks. BioMed Research International, 2015, 2015, 1-13.	0.9	26
69	EEG Signals Analysis Using Multiscale Entropy for Depth of Anesthesia Monitoring during Surgery through Artificial Neural Networks. Computational and Mathematical Methods in Medicine, 2015, 2015, 1-16.	0.7	40
70	Instantaneous 3D EEG Signal Analysis Based on Empirical Mode Decomposition and the Hilbertâ€"Huang Transform Applied to Depth of Anaesthesia. Entropy, 2015, 17, 928-949.	1.1	16
71	Genetic type-2 self-organising fuzzy logic controller applied to anaesthesia. , 2015, , .		3
72	Simple tai chi exercise for improving elderly postural stability via complexity index analysis. Artificial Life and Robotics, 2015, 20, 42-48.	0.7	2

#	ARTICLE	IF	CITATIONS
73	Detecting signal quality by ensemble empirical mode decomposition and Monte Carlo verification. Biomedical Signal Processing and Control, 2015, 20, 10-15.	3.5	6
74	Effect of mannitol on cerebrovascular pressure reactivity in patients with intracranial hypertension. Journal of the Formosan Medical Association, 2015, 114, 842-848.	0.8	6
75	Complexity of heart rate variability predicts outcome in intensive care unit admitted patients with acute strokeÂ. Journal of Neurology, Neurosurgery and Psychiatry, 2015, 86, 95-100.	0.9	77
76	Complexity of Multi-Channel Electroencephalogram Signal Analysis in Childhood Absence Epilepsy. PLoS ONE, 2015, 10, e0134083.	1.1	25
77	Performance Analysis of Extracted Rule-Base Multivariable Type-2 Self-Organizing Fuzzy Logic Controller Applied to Anesthesia. BioMed Research International, 2014, 2014, 1-19.	0.9	10
78	A critical care monitoring system for depth of anaesthesia analysis based on entropy analysis and physiological information database. Australasian Physical and Engineering Sciences in Medicine, 2014, 37, 591-605.	1.4	8
79	Hip fracture risk assessment: artificial neural network outperforms conditional logistic regression in an age- and sex-matched case control study. BMC Musculoskeletal Disorders, 2013, 14, 207.	0.8	18
80	Multivariable Type-2 Self-Organizing Fuzzy Logic Controllers for Regulating Anesthesia with Rule Base Extraction. , 2013, , .		2
81	Analysis of EEG via Multivariate Empirical Mode Decomposition for Depth of Anesthesia Based on Sample Entropy. Entropy, 2013, 15, 3458-3470.	1.1	52
82	Application of Multivariate Empirical Mode Decomposition and Sample Entropy in EEG Signals via Artificial Neural Networks for Interpreting Depth of Anesthesia. Entropy, 2013, 15, 3325-3339.	1.1	62
83	Nonlinear and Conventional Biosignal Analyses Applied to Tilt Table Test for Evaluating Autonomic Nervous System and Autoregulation. Open Biomedical Engineering Journal, 2013, 7, 93-99.	0.7	9
84	Investigating Properties of the Cardiovascular System Using Innovative Analysis Algorithms Based on Ensemble Empirical Mode Decomposition. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-11.	0.7	5
85	Two-Dimensional Matrix Algorithm Using Detrended Fluctuation Analysis to Distinguish Burkitt and Diffuse Large B-Cell Lymphoma. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-8.	0.7	5
86	Ensembled neural networks applied to modeling survival rate for the patients with out-of-hospital cardiac arrest. Artificial Life and Robotics, 2012, 17, 241-244.	0.7	5
87	Diffuse large B-cell lymphoma classification using linguistic analysis and ensembled artificial neural networks. Journal of the Taiwan Institute of Chemical Engineers, 2012, 43, 15-23.	2.7	4
88	A comparison of patientsâ€™ heart rate variability and blood flow variability during surgery based on the Hilbertâ€"Huang Transform. Biomedical Signal Processing and Control, 2012, 7, 465-473.	3.5	12
89	Hybrid Biomedical Intelligent Systems. Advances in Fuzzy Systems, 2012, 2012, 1-1.	0.6	1
90	Adaptive Computation of Multiscale Entropy and Its Application in EEG Signals for Monitoring Depth of Anesthesia During Surgery. Entropy, 2012, 14, 978-992.	1.1	44

#	Article	IF	Citations
91	Multivariate Multiscale Entropy Applied to Center of Pressure Signals Analysis: An Effect of Vibration Stimulation of Shoes. Entropy, 2012, 14, 2157-2172.	1.1	35
92	Complexity of intracranial pressure correlates with outcome after traumatic brain injury. Brain, 2012, 135, 2399-2408.	3.7	73
93	Ensembled neural networks for brain death prediction for patients with severe head injury. Biomedical Signal Processing and Control, 2011, 6, 414-421.	3.5	11
94	Developing a monitoring psychological stress index system via photoplethysmography. Artificial Life and Robotics, 2011, 16, 430-433.	0.7	6
95	Ensembled artificial neural networks to predict the fitness score for body composition analysis. Journal of Nutrition, Health and Aging, 2011, 15, 341-348.	1.5	10
96	Brain death prediction based on ensembled artificial neural networks in neurosurgical intensive care unit. Journal of the Taiwan Institute of Chemical Engineers, 2011, 42, 97-107.	2.7	20
97	Intrinsic Mode Analysis of Human Heartbeat Time Series. Annals of Biomedical Engineering, 2010, 38, 1337-1344.	1.3	16
98	Investigating fractal property and respiratory modulation of human heartbeat time series using empirical mode decomposition. Medical Engineering and Physics, 2010, 32, 490-496.	0.8	14
99	COMPLEMENTARY ENSEMBLE EMPIRICAL MODE DECOMPOSITION: A NOVEL NOISE ENHANCED DATA ANALYSIS METHOD. Advances in Adaptive Data Analysis, 2010, 02, 135-156.	0.6	1,013
100	EXTRACTING RESPIRATION RATE FROM RAW ECG SIGNALS. Biomedical Engineering - Applications, Basis and Communications, 2010, 22, 307-314.	0.3	3
101	DISCRIMINATION OF PAIN INTENSITY LEVEL AND SIDE EFFECTS OF POSTOPERATIVE PAIN USING PARAMETERS EXTRACTED FROM THE EVOKED PAIN PATTERN. Biomedical Engineering - Applications, Basis and Communications, 2009, 21, 29-38.	0.3	1
102	Human heart beat analysis using a modified algorithm of detrended fluctuation analysis based on empirical mode decomposition. Medical Engineering and Physics, 2009, 31, 92-100.	0.8	46
103	Rule extraction by fuzzy modeling algorithm for fuzzy logic control of cisatracurium as a neuromuscular block. Engineering Applications of Artificial Intelligence, 2009, 22, 129-140.	4.3	9
104	Dynamic cerebral autoregulation in carotid stenosis before and after carotid stenting. Journal of Vascular Surgery, 2008, 48, 88-92.	0.6	38
105	FUZZY PAIN DEMAND INDEX FROM AN i-PAIN SYSTEM FOR ASSESSMENT OF POSTOPERATIVE PAIN VIA PATIENT-CONTROLLED ANALGESIA USING DIFFERENT AMOUNTS AND COMBINATION DRUGS. Biomedical Engineering - Applications, Basis and Communications, 2008, 20, 249-258.	0.3	0
106	A NOVEL BLOCKING INDEX BASED ON SIMILARITY MEASUREMENT APPLIED IN DISTINGUISHING THE PATTERNS OF BLOOD PRESSURE SIGNALS AT DYNAMICALLY TRANSITIONAL SITUATION. Biomedical Engineering - Applications, Basis and Communications, 2008, 20, 107-114.	0.3	1
107	NONRANDOMNESS INDEX APPLIED FOR HEART RATE VARIABILITY IN SURGICAL INTENSIVE CARE UNITS USING FREQUENCY AND RANK ORDER STATISTICS. Biomedical Engineering - Applications, Basis and Communications, 2007, 19, 303-311.	0.3	4
108	AN ENHANCED PATIENT CONTROLLED ANALGESIA (EPCA) FOR THE EXTRACORPOREAL SHOCK WAVE LITHOTRIPSY (ESWL). Biomedical Engineering - Applications, Basis and Communications, 2007, 19, 7-17.	0.3	4

#	Article	IF	Citations
109	A Novel Fuzzy Pain Demand Index Derived From Patient-Controlled Analgesia for Postoperative Pain. IEEE Transactions on Biomedical Engineering, 2007, 54, 2123-2132.	2.5	33
110	Genetic fuzzy modelling and control of bispectral index (BIS) for general intravenous anaesthesia. Medical Engineering and Physics, 2006, 28, 134-148.	0.8	24
111	Fuzzy logic control for intracranial pressure via continuous propofol sedation in a neurosurgical intensive care unit. Medical Engineering and Physics, 2006, 28, 639-647.	0.8	21
112	Comparison of the Applicability of Rule-Based and Self-Organizing Fuzzy Logic Controllers for Sedation Control of Intracranial Pressure Pattern in a Neurosurgical Intensive Care Unit. IEEE Transactions on Biomedical Engineering, 2006, 53, 1700-1705.	2.5	24
113	MUSCLE RELAXATION CONTROLLED BY AUTOMATED ADMINISTRATION OF CISATRACURIUM. Biomedical Engineering - Applications, Basis and Communications, 2006, 18, 284-295.	0.3	4
114	DETRENDED FLUCTUATION ANALYSES OF SHORT-TERM HEART RATE VARIABILITY IN SURGICAL INTENSIVE CARE UNITS. Biomedical Engineering - Applications, Basis and Communications, 2006, 18, 67-72.	0.3	22
115	DESIGN A HIERARCHICAL SYSTEM FOR MONITORING MOBILITY CHANGES OF THE ELDERLY USING INTELLIGENT ANALYSIS. Biomedical Engineering - Applications, Basis and Communications, 2005, 17, 207-214.	0.3	4
116	THE INTELLIGENT ARCHITECTURE FOR SIMULATION OF INHALATIONAL ANAESTHESIA. Biomedical Engineering - Applications, Basis and Communications, 2004, 16, 272-280.	0.3	3
117	Intracranial pressure model in intensive care unit using a simple recurrent neural network through time. Neurocomputing, 2004, 57, 239-256.	3.5	28
118	AN ADVISORY SYSTEM FOR PROPOFOL ANAESTHESIA AFTER DETERMINING THE SENSITIVITY OF THE PATIENT DURING THE INDUCTION STAGE. Biomedical Engineering - Applications, Basis and Communications, 2003, 15, 47-55.	0.3	2
119	THE MONITORING AND CONTROL OF AN ARM CRANK SYSTEM USING FUZZY LOGIC FOR MULTI-HANDICAPPED YOUTHS WITH MENTAL RETARDATION. Biomedical Engineering - Applications, Basis and Communications, 2002, 14, 197-203.	0.3	0
120	Hierarchical rule-based monitoring and fuzzy logic control for neuromuscular block. Journal of Clinical Monitoring and Computing, 2000, 16, 583-592.	0.7	32
121	Precisely forecasting population dynamics of agricultural pests based on an interval type-2 fuzzy logic system: case study for oriental fruit flies and the tobacco cutworms. Precision Agriculture, 0, , 1.	3.1	5