Jiann-Shing Shieh

List of Publications by Year
in descending order

Version: 2024-02-01

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	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
2	ECG arrhythmia classification by using a recurrence plot and convolutional neural network. Biomedical Signal Processing and Control, 2021, 64, 102262.	3.5	103
3	Pain and Stress Detection Using Wearable Sensors and Devicesâ€"A Review. Sensors, 2021, 21, 1030.	2.1	84
4	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
5	Complexity of intracranial pressure correlates with outcome after traumatic brain injury. Brain, 2012, 135, 2399-2408.	3.7	73
6	Heart Rate Variability Signal Features for Emotion Recognition by Using Principal Component Analysis and Support Vectors Machine. , 2016, , .		66
7	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
8	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
9	Analysis of EEG via Multivariate Empirical Mode Decomposition for Depth of Anesthesia Based on Sample Entropy. Entropy, 2013, 15, 3458-3470.	1.1	52
10	Identification of Atrial Fibrillation by Quantitative Analyses of Fingertip Photoplethysmogram. Scientific Reports, 2017, 7, 45644.	1.6	51
11	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
12	Complexity of Heart Rate Variability Can Predict Stroke-In-Evolution in Acute Ischemic Stroke Patients. Scientific Reports, 2015, 5, 17552.	1.6	48
13	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
14	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
15	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
16	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
17	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
18	Dynamic cerebral autoregulation in carotid stenosis before and after carotid stenting. Journal of Vascular Surgery, 2008, 48, 88-92.	0.6	38

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19	Arrhythmia Evaluation in Wearable ECG Devices. Sensors, 2017, 17, 2445.	2.1	37
20	Multiscale Entropy of Electroencephalogram as a Potential Predictor for the Prognosis of Neonatal Seizures. PLoS ONE, 2015, 10, e0144732.	1.1	36
21	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
22	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
23	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
24	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
25	Hierarchical rule-based monitoring and fuzzy logic control for neuromuscular block. Journal of Clinical Monitoring and Computing, 2000, 16, 583-592.	0.7	32
26	Healthcare Engineering Defined: A White Paper. Journal of Healthcare Engineering, 2015, 6, 635-648.	1.1	29
27	Intracranial pressure model in intensive care unit using a simple recurrent neural network through time. Neurocomputing, 2004, 57, 239-256.	3.5	28
28	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
29	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
30	Computational Depth of Anesthesia via Multiple Vital Signs Based on Artificial Neural Networks. BioMed Research International, 2015, 2015, 1-13.	0.9	26
31	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
32	Complexity of Multi-Channel Electroencephalogram Signal Analysis in Childhood Absence Epilepsy. PLoS ONE, 2015, 10, e0134083.	1.1	25
33	Genetic fuzzy modelling and control of bispectral index (BIS) for general intravenous anaesthesia. Medical Engineering and Physics, 2006, 28, 134-148.	0.8	24
34	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
35	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
36	Genetic Deep Convolutional Autoencoder Applied for Generative Continuous Arterial Blood Pressure via Photoplethysmography. Sensors, 2020, 20, 3829.	2.1	23

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37	ECG Recurrence Plot-Based Arrhythmia Classification Using Two-Dimensional Deep Residual CNN Features. Sensors, 2022, 22, 1660.	2.1	23
38	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
39	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
40	Altered resting-state EEG complexity in children with Tourette syndrome: A preliminary study.. Neuropsychology, 2017, 31, 395-402.	1.0	21
41	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
42	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
43	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
44	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
45	Deep learning via ECG and PPG signals for prediction of depth of anesthesia. Biomedical Signal Processing and Control, 2021, 68, 102663.	3.5	17
46	Intrinsic Mode Analysis of Human Heartbeat Time Series. Annals of Biomedical Engineering, 2010, 38, 1337-1344.	1.3	16
47	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
48	The Potential Application of Multiscale Entropy Analysis of Electroencephalography in Children with Neurological and Neuropsychiatric Disorders. Entropy, 2017, 19, 428.	1.1	16
49	Development of an E-nose system using machine learning methods to predict ventilator-associated pneumonia. Microsystem Technologies, 2022, 28, 341-351.	1.2	15
50	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
51	Impact of Supratentorial Cerebral Hemorrhage on the Complexity of Heart Rate Variability in Acute Stroke. Scientific Reports, 2018, 8, 11473.	1.6	14
52	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
53	Detecting Defects in PCB using Deep Learning via Convolution Neural Networks. , 2018, , .		13
54	Nicardipine Inhibits Priming of the NLRP3 Inflammasome via Suppressing LPS-Induced TLR4 Expression. Inflammation, 2020, 43, 1375-1386.	1.7	13

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55	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
56	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
57	Electroencephalography complexity in infantile spasms and its association with treatment response. Clinical Neurophysiology, 2021, 132, 480-486.	0.7	12
58	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
59	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
60	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
61	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
62	Ensemble Genetic Fuzzy Neuro Model Applied for the Emergency Medical Service via Unbalanced Data Evaluation. Symmetry, 2018, 10, 71.	1.1	10
63	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
64	Integrations between Autonomous Systems and Modern Computing Techniques: A Mini Review. Sensors, 2019, 19, 3897.	2.1	10
65	HRV-derived data similarity and distribution index based on ensemble neural network for measuring depth of anaesthesia. PeerJ, 2017, 5, e4067.	0.9	10
66	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
67	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
68	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
69	Explainable AI (XAI) Applied in Machine Learning for Pain Modeling: A Review. Technologies, 2022, 10, 74.	3.0	9
70	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
71	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
72	Unsupervised Anomaly Detection in Printed Circuit Boards through Studentâ€“Teacher Feature Pyramid Matching. Electronics (Switzerland), 2021, 10, 3177.	1.8	8

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73	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
74	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
75	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
76	Developing a monitoring psychological stress index system via photoplethysmography. Artificial Life and Robotics, 2011, 16, 430-433.	0.7	6
77	Detecting signal quality by ensemble empirical mode decomposition and Monte Carlo verification. Biomedical Signal Processing and Control, 2015, 20, 10-15.	3.5	6
78	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
79	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
80	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
81	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
82	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
83	Continuous Monitoring of the Complexity of Intracranial Pressure After Head Injury. Acta Neurochirurgica Supplementum, 2016, 122, 33-35.	0.5	5
84	Intermittent blood pressure prediction via multiscale entropy and ensemble artificial neural networks. , 2016, , .		5
85	Non-Invasive Hemodynamics Monitoring System Based on Electrocardiography via Deep Convolutional Autoencoder. Sensors, 2021, 21, 6264.	2.1	5
86	Electroencephalogram variability analysis for monitoring depth of anesthesia. Journal of Neural Engineering, 2021, 18, .	1.8	5
87	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
88	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
89	MUSCLE RELAXATION CONTROLLED BY AUTOMATED ADMINISTRATION OF CISATRACURIUM. Biomedical Engineering - Applications, Basis and Communications, 2006, 18, 284-295.	0.3	4
90	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

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91	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
92	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
93	3D printed prosthetic hands. , 2016, , .		4
94	Electroencephalogram Similarity Analysis Using Temporal and Spectral Dynamics Analysis for Propofol and Desflurane Induced Unconsciousness. Symmetry, 2018, 10, 15.	1.1	4
95	THE INTELLIGENT ARCHITECTURE FOR SIMULATION OF INHALATIONAL ANAESTHESIA. Biomedical Engineering - Applications, Basis and Communications, 2004, 16, 272-280.	0.3	3
96	EXTRACTING RESPIRATION RATE FROM RAW ECG SIGNALS. Biomedical Engineering - Applications, Basis and Communications, 2010, 22, 307-314.	0.3	3
97	An effective algorithm for dynamic pedometer calculation. , 2015, , .		3
98	Genetic type-2 self-organising fuzzy logic controller applied to anaesthesia. , 2015, , .		3
99	Ensemble empirical mode decomposition applied for PPG motion artifact. , 2016, , .		3
100	A novel mechanical chest compressor with rapid deployment in all population cardiopulmonary resuscitation. Scientific Reports, 2020, 10, 6099.	1.6	3
101	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
102	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
103	Multivariable Type-2 Self-Organizing Fuzzy Logic Controllers for Regulating Anesthesia with Rule Base Extraction. , 2013, , .		2
104	Simple tai chi exercise for improving elderly postural stability via complexity index analysis. Artificial Life and Robotics, 2015, 20, 42-48.	0.7	2
105	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
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	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
108	Hybrid Biomedical Intelligent Systems. Advances in Fuzzy Systems, 2012, 2012, 1-1.	0.6	1

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109	Applied a Multi-scale Entropy Algorithm to Analyze Dynamic COP Signal via Accelerometer Sensor. , 2016, , .		1
110	A simple method for walking posture analysis using accelerometers. , 2016, , .		1
111	Special Issue â€œAdvanced Signal Processing in Intelligent Systems for Health Monitoringâ€• Sensors, 2019, 19, 4727.	2.1	1
112	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
113	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
114	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
115	Cardiopulmonary Resuscitation Pattern Evaluation Based on Ensemble Empirical Mode Decomposition Filter via Nonlinear Approaches. BioMed Research International, 2016, 2016, 1-6.	0.9	0
116	Predicting the percentage of atrial fibrillation using sample entropy. , 2016, , .		0
117	Analyzing heart rate variability using a photoplethysmographic signal measuring system. , 2016, , .		0
118	A modular integrating algorithm for multiple arrhythmia detection. , 2016, , .		0
119	Computational Fluid Dynamics Based Fuzzy Control Optimization of Heat Exchanger via Genetic Algorithm. , 2019, , .		0
120	Automatic control of anesthesia via different vital signs. , 2022, , 33-41.		0
121	Special Issue â€œAdvanced Signal Processing in Wearable Sensors for Health Monitoringâ€• Sensors, 2022, 22, 2189.	2.1	0