James M Keller

List of Publications by Year
in descending order

153 papers	6,419 citations	159585 30 h-index	82547 72 g-index
156 all docs	156 docs citations	156 times ranked	4525 citing authors

#	Article	IF	Citations
1	A fuzzy K-nearest neighbor algorithm. IEEE Transactions on Systems, Man, and Cybernetics, 1985, SMC-15, 580-585.	0.9	1,964
2	Incorporating Fuzzy Membership Functions into the Perceptron Algorithm. IEEE Transactions on Pattern Analysis and Machine Intelligence, 1985, PAMI-7, 693-699.	13.9	206
3	Linguistic summarization of video for fall detection using voxel person and fuzzy logic. Computer Vision and Image Understanding, 2009, 113, 80-89.	4.7	202
4	Advances in fuzzy integration for pattern recognition. Fuzzy Sets and Systems, 1994, 65, 273-283.	2.7	135
5	Characteristics of Natural Scenes Related to the Fractal Dimension. IEEE Transactions on Pattern Analysis and Machine Intelligence, 1987, PAMI-9, 621-627.	13.9	130
6	Recognizing Falls from Silhouettes. , 2006, 2006, 6388-91.		122
7	Activity Analysis, Summarization, and Visualization for Indoor Human Activity Monitoring. IEEE Transactions on Circuits and Systems for Video Technology, 2008, 18, 1489-1498.	8.3	111
8	Fuzzy Clustering: A Historical Perspective. IEEE Computational Intelligence Magazine, 2019, 14, 45-55.	3.2	111
9	Comparing Fuzzy, Probabilistic, and Possibilistic Partitions. IEEE Transactions on Fuzzy Systems, 2010, 18, 906-918.	9.8	105
10	Generalized Choquet fuzzy integral fusion. Information Fusion, 2002, 3, 69-85.	19.1	104
11	Training the fuzzy integral. International Journal of Approximate Reasoning, 1996, 15, 1-24.	3.3	95
12	Modeling Human Activity From Voxel Person Using Fuzzy Logic. IEEE Transactions on Fuzzy Systems, 2009, 17, 39-49.	9.8	94
13	The use of force histograms for affine-invariant relative position description. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2004, 26, 1-0_6.	13.9	88
14	Day or Night Activity Recognition From Video Using Fuzzy Clustering Techniques. IEEE Transactions on Fuzzy Systems, 2014, 22, 483-493.	9.8	82
15	Clustering ellipses for anomaly detection. Pattern Recognition, 2011, 44, 55-69.	8.1	77
16	Roach Infestation Optimization. , 2008, , .		75
17	Automated In-Home Fall Risk Assessment and Detection Sensor System for Elders. Gerontologist, The, 2015, 55, S78-S87.	3.9	68
18	Minimum Classification Error Training for Choquet Integrals With Applications to Landmine Detection. IEEE Transactions on Fuzzy Systems, 2008, 16, 225-238.	9.8	61

#	ARTICLE	IF	CITATIONS
19	Frequency Subband Processing and Feature Analysis of Forward-Looking Ground-Penetrating Radar Signals for Land-Mine Detection. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 718-729.	6.3	55
20	Enabling Explainable Fusion in Deep Learning With Fuzzy Integral Neural Networks. IEEE Transactions on Fuzzy Systems, 2020, 28, 1291-1300.	9.8	47
21	Relational Generalizations of Cluster Validity Indices. IEEE Transactions on Fuzzy Systems, 2010, 18, 771-786.	9.8	46
22	Cardiovascular Function and Ballistocardiogram: A Relationship Interpreted via Mathematical Modeling. IEEE Transactions on Biomedical Engineering, 2019, 66, 2906-2917.	4.2	41
23	Extension of the Fuzzy Integral for General Fuzzy Set-Valued Information. IEEE Transactions on Fuzzy Systems, 2014, 22, 1625-1639.	9.8	40
24	Monitoring the Relative Blood Pressure Using a Hydraulic Bed Sensor System. IEEE Transactions on Biomedical Engineering, 2019, 66, 740-748.	4.2	40
25	Title is missing!. Autonomous Robots, 2003, 14, 51-69.	4.8	38
26	Linguistic summarization of sensor data for eldercare. , 2011, , .		37
27	A Fuzzy Rule-Based Approach to Scene Description Involving Spatial Relationships. Computer Vision and Image Understanding, 2000, 80, 21-41.	4.7	36
28	A Fuzzy Measure Similarity Between Sets of Linguistic Summaries. IEEE Transactions on Fuzzy Systems, 2013, 21, 183-189.	9.8	36
29	Linguistic Prototypes for Data From Eldercare Residents. IEEE Transactions on Fuzzy Systems, 2014, 22, 110-123.	9.8	36
30	Learning Fuzzy-Valued Fuzzy Measures for the Fuzzy-Valued Sugeno Fuzzy Integral. Lecture Notes in Computer Science, 2010, , 502-511.	1.3	36
31	Linguistic summarization of long-term trends for understanding change in human behavior. , 2011, , .		34
32	Sleep Posture Classification Using Bed Sensor Data and Neural Networks. , 2018, 2018, 461-465.		34
33	Is VAT really single linkage in disguise?. Annals of Mathematics and Artificial Intelligence, 2009, 55, 237-251.	1.3	32
34	Recognizing complex instrumental activities of daily living using scene information and fuzzy logic. Computer Vision and Image Understanding, 2015, 140, 68-82.	4.7	32
35	LADAR target detection using morphological shared-weight neural networks. Machine Vision and Applications, 2000, 11, 300-305.	2.7	31
36	Image segmentation in the presence of uncertainty. International Journal of Intelligent Systems, 1990, 5, 193-208.	5.7	30

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37	Speedup of Fuzzy Clustering Through Stream Processing on Graphics Processing Units. IEEE Transactions on Fuzzy Systems, 2008, 16, 1101-1106.	9.8	30
38	Clustering in ordered dissimilarity data. International Journal of Intelligent Systems, 2009, 24, 504-528.	5.7	29
39	A distance metric for a space of linguistic summaries. Fuzzy Sets and Systems, 2012, 208, 79-94.	2.7	26
40	Dunn&#x2019;s cluster validity index as a contrast measure of VAT images. , 2008, , .		24
41	Body sway measurement for fall risk assessment using inexpensive webcams. , 2010, 2010, 2225-9.		24
42	Deep convolutional neural network target classification for underwater synthetic aperture sonar imagery. , 2019, , .		23
43	Growing neural gas for temporal clustering. , 2008, , .		22
44	A Memetic Algorithm for Matching Spatial Configurations With the Histograms of Forces. IEEE Transactions on Evolutionary Computation, 2013, 17, 588-604.	10.0	22
45	Fuzzy additive hybrid operators for network-based decision making. International Journal of Intelligent Systems, 1994, 9, 1001-1023.	5.7	21
46	A fuzzy Choquet integral with an interval type-2 fuzzy number-valued integrand. , 2010, , .		21
47	Local fractal geometric features for image segmentation. International Journal of Imaging Systems and Technology, 1990, 2, 267-284.	4.1	20
48	Linguistic summarization of in-home sensor data. Journal of Biomedical Informatics, 2019, 96, 103240.	4.3	20
49	Fuzzy Confidence Measures in Midlevel Vision. IEEE Transactions on Systems, Man, and Cybernetics, 1987, 17, 676-683.	0.9	19
50	Finding the number of clusters in ordered dissimilarities. Soft Computing, 2009, 13, 1125-1142.	3.6	19
51	Computing With Words With the Ontological Self-Organizing Map. IEEE Transactions on Fuzzy Systems, 2010, 18, 473-485.	9.8	18
52	A fuzzy logic rule-based automatic target recognizer. International Journal of Intelligent Systems, 1991, 6, 295-312.	5.7	17
53	Falls, Technology, and Stunt Actors. Journal of Nursing Care Quality, 2008, 23, 195-201.	0.9	17
54	Multiple Instance Choquet integral for classifier fusion. , 2016, , .		17

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55	Possibilistic fuzzy local information C-Means for sonar image segmentation. , 2017, , .		17
56	Adaptive Silouette Extraction and Human Tracking in Complex and Dynamic Environments. , 2006, , .		16
57	Segmentation and linguistic summarization of voxel environments using stereo vision and genetic algorithms. , 2010, , .		16
58	Extracting footfalls from voxel data. , 2010, 2010, 1119-22.		16
59	Clustering of Detected Changes in High-Resolution Satellite Imagery Using a Stabilized Competitive Agglomeration Algorithm. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 4687-4703.	6.3	16
60	Similarity measure for anomaly detection and comparing human behaviors. International Journal of Intelligent Systems, 2012, 27, 733-756.	5.7	16
61	Streaming Data Analysis: Clustering or Classification?. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 91-102.	9.3	16
62	Video-based activity monitoring for indoor environments. , 2009, , .		15
63	A temporal analysis system for early detection of health changes. , 2016, , .		15
64	Non-Invasive In-Home Sleep Stage Classification Using a Ballistocardiography Bed Sensor. , 2019, , .		15
65	Explainable AI for the Choquet Integral. IEEE Transactions on Emerging Topics in Computational Intelligence, 2021, 5, 520-529.	4.9	15
66	AN APPROXIMATE REASONING TECHNIQUE FOR RECOGNITION IN COLOR IMAGES OF BEEF STEAKS. International Journal of General Systems, 1990, 16, 331-342.	2.5	13
67	<title>Detection and classification of MSTAR objects via morphological shared-weight neural networks</title>. , 1998, , .		13
68	On the computation of semantically ordered truth values of linguistic protoform summaries. , 2015, , .		13
69	Recognizing Falls from Silhouettes. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	13
70	Scene Matching between a Map and a Hand Drawn Sketch Using Spatial Relations. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	12
71	Fuzzy cluster analysis of bioinformatics data composed of microarray expression data and gene ontology annotations. , 2008, , .		12
72	Sit-to-stand detection using fuzzy clustering techniques. , 2010, , .		12

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73	Sequential Possibilistic One-Means Clustering with Dynamic Eta. , 2018, , .		12
74	Emergent trend detection in diurnal activity. , 2008, 2008, 3815-8.		11
75	Contour tracking of human exercises. , 2009, , .		11
76	Sit-to-Stand Measurement for In-Home Monitoring Using Voxel Analysis. IEEE Journal of Biomedical and Health Informatics, 2014, 18, 1502-1509.	6.3	11
77	Sleep stage recognition using respiration signal. , 2016, 2016, 2843-2846.		11
78	Some neural net realizations of fuzzy reasoning. International Journal of Intelligent Systems, 1998, 13, 859-886.	5.7	10
79	GENE ONTOLOGY SIMILARITY MEASURES BASED ON LINEAR ORDER STATISTICS. International Journal of Uncertainty, Fuzziness and Knowlege-Based Systems, 2006, 14, 639-661.	1.9	10
80	A new cluster validity measure for bioinformatics relational datasets. , 2008, , .		10
81	Similarity evaluation of sets of linguistic summaries. International Journal of Intelligent Systems, 2012, 27, 926-938.	5.7	10
82	Textual summarization of events leading to health alerts. , 2015, 2015, 7634-7.		10
83	Sequential possibilistic one-means clustering. , 2017, , .		10
84	Analysis of Streaming Clustering Using an Incremental Validity Index. , 2018, , .		10
85	TLPCM: Transfer Learning Possibilistic C-Means. IEEE Transactions on Fuzzy Systems, 2021, 29, 940-952.	9.8	10
86	Linguistic description of adult skeletal age-at-death estimations from fuzzy integral acquired fuzzy sets. , 2011, , .		9
87	Quantitative analysis of 180 degree turns for fall risk assessment using video sensors. , 2011, 2011, 7606-9.		9
88	Granular Modeling of Fuzzy Color Categories. IEEE Transactions on Fuzzy Systems, 2020, 28, 1897-1909.	9.8	9
89	Extending the Morphological Hit-or-Miss Transform to Deep Neural Networks. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 4826-4838.	11.3	9
90	Relational mountain (density) clustering method and web log analysis. International Journal of Intelligent Systems, 2005, 20, 375-392.	5.7	8

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91	Mapping natural language to imagery: Placing objects intelligently. , 2009, , .		8
92	Non-invasive monitoring of vital signs for older adults using recliner chairs. Health and Technology, 2021, 11, 169-184.	3.6	8
93	Relational Duals of Cluster-Validity Functions for the c -Means Family. IEEE Transactions on Fuzzy Systems, 2010, 18, 1160-1170.	9.8	7
94	Conflation of Vector Buildings With Imagery. IEEE Geoscience and Remote Sensing Letters, 2011, 8, 83-87.	3.1	7
95	Generation of prototypes from sets of linguistic summaries. , 2012, , .		7
96	Anomaly detection from linguistic summaries. , 2013, , .		7
97	Analysis of Incremental Cluster Validity for Big Data Applications. International Journal of Uncertainty, Fuzziness and Knowlege-Based Systems, 2018, 26, 47-62.	1.9	7
98	Tracking personalized functional health in older adults using geriatric assessments. BMC Medical Informatics and Decision Making, 2020, 20, 270.	3.0	7
99	Pulsed-Field Gel Elec rophoresis Pa ern Recogni ion of Bac erial DNA: A Systemic Approach. Pattern Analysis and Applications, 2001, 4, 244-255.	4.6	6
100	Nighttime in-home action monitoring for eldercare. , 2011, 2011, 5299-302.		6
101	A framework for computing crowd emotions using agent based modeling. , 2013, , .		6
102	Early illness recognition in older adults using transfer learning. , 2017, , .		6
103	A Weighted Matrix Visualization for Fuzzy Measures and Integrals. , 2020, , .		6
104	Evaluating Evolving Structure in Streaming Data With Modified Dunn's Indices. IEEE Transactions on Emerging Topics in Computational Intelligence, 2021, 5, 262-273.	4.9	6
105	A Comparison of Five Fuzzy Rand Indices. Communications in Computer and Information Science, 2010, , 446-454.	0.5	6
106	Combining Physiology-Based Modeling and Evolutionary Algorithms for Personalized, Noninvasive Cardiovascular Assessment Based on Electrocardiography and Ballistocardiography. Frontiers in Physiology, 2021, 12, 739035.	2.8	6
107	Anti-Personnel Land Mine Detection and Discrimination Using Acoustic Data. Subsurface Sensing Technologies and Applications, 2002, 3, 75-93.	0.9	5
108	A relational dual of the fuzzy possibilistic c-means algorithm. , 2010, , .		5

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109	Detection of buried objects in FLIR imaging using mathematical morphology and SVM. , 2012, , .		5
110	An extension of a confined space evacuation model to human geography. , 2012, , .		5
111	A framework for harmonizing sensor data to support embedded health assessment. , 2014, 2014, 1747-51.		5
112	Robust On-Line Streaming Clustering. Communications in Computer and Information Science, 2018, , 467-478.	0.5	5
113	Linear Order Statistic Neuron. , 2019, , .		5
114	StreamSoNG: A Soft Streaming Classification Approach. IEEE Transactions on Emerging Topics in Computational Intelligence, 2022, 6, 700-709.	4.9	5
115	Mechanism-Driven Modeling to Aid Non-invasive Monitoring of Cardiac Function via Ballistocardiography. Frontiers in Medical Technology, 2022, 4, 788264.	2.5	5
116	Phase signatures in acoustic-seismic land mine detection. Radio Science, 2004, 39, n/a-n/a.	1.6	4
117	A Robot in a Water Maze: Learning a Spatial Memory Task. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	4
118	Learning the Fuzzy Connectives of a Multilayer Network Using Particle Swarm Optimization. , 2007, , .		4
119	Adaptive temporal difference learning of spatial memory in the water maze task. , 2008, , .		4
120	eCCV: A new fuzzy cluster validity measure for large relational bioinformatics datasets. , 2009, , .		4
121	Implementing bounded rationality in disaster agent behavior using OGA operators. , 2012, , .		4
122	Visualizing uncertainty with fuzzy rose diagrams. , 2014, , .		4
123	Quantitative and qualitative comparison of periodic sensor data. , 2016, , .		4
124	Data Stream Trajectory Analysis Using Sequential Possibilistic Gaussian Mixture Model. , 2019, , .		4
125	A New Incremental Cluster Validity Index for Streaming Clustering Analysis. , 2019, , .		4
126	Possibilistic Clustering Enabled Neuro Fuzzy Logic. , 2020, , .		4

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127	New Linguistic Description Approach for Time Series and Its Application to Bed Restlessness Monitoring for Eldercare. IEEE Transactions on Fuzzy Systems, 2022, 30, 1048-1059.	9.8	4
128	A modified genetic algorithm for matching building sets with the histograms of forces. , 2010, , .		3
129	Dirt road segmentation using color and texture features in color imagery. , 2012, , .		3
130	Detecting foreground disambiguation of depth images using fuzzy logic. , 2013, , .		3
131	Context preserving representation of daily activities in elder care. , 2017, , .		3
132	Adaptive multidimensional fuzzy sets for texture modeling. International Journal of Approximate Reasoning, 2018, 103, 288-302.	3.3	3
133	On a Granular Approach for Fuzzy Color Modelling. , 2020, , .		3
134	Noninvasive cardiovascular monitoring based on electrocardiography and ballistocardiography: a feasibility study on patients in the surgical intensive care unit. , 2021, 2021, 951-954.		3
135	Fuzzy contour tracking of human silhouettes. , 2009, , .		2
136	Object set matching with an evolutionary algorithm. , 2011, , .		2
137	Causal cueing system for above ground anomaly detection of explosive hazards using support vector machine localized by K-nearest neighbor. , 2012, , .		2
138	Evolving a fuzzy goal-driven strategy for the game of Geister: An exercise in teaching computational intelligence. , 2014, , .		2
139	A human geospatial predictive analytics framework with application to finding medically underserved areas. , 2014, , .		2
140	Sequential Possibilistic Local Information One-Means Clustering For Image Segmentation. , 2020, , .		2
141	Explainable Systematic Analysis for Synthetic Aperture Sonar Imagery. , 2021, , .		2
142	Genetic fuzzy programs. , 2008, , .		1
143	A graph-based memetic approach to sketch geolocation. , 2013, , .		1
144	Patient stratification based on Activity of Daily Living score using Relational Self-Organizing Maps. , 2014, , .		1

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145	Building a framework for recognition of activities of daily living from depth images using fuzzy logic. , 2014, , .		1
146	A myopic Monte Carlo strategy for the partially observable travelling salesman problem. , 2016, , .		1
147	A Novel Distance for Automated Surgical Skill Evaluation. , 2019, , .		1
148	Possibilistic C-Shell Clustering with Inter-Cluster Constraints. , 2006, , .		0
149	Fuzzy Approaches for the Analysis CpG Island Methylation Patterns. , 0, , 141-165.		0
150	Surgery Task Classification Using Procrustes Analysis. , 2019, , .		0
151	Evaluating Path Costs in Multi-Attributed Fuzzy Weighted Graphs. , 2019, , .		0
152	Comments on "TLPCM: Transfer Learning Possibilistic C-Means" Errata and Observations. IEEE Transactions on Fuzzy Systems, 2021, 29, 702-704.	9.8	0
153	Divergence Regulated Encoder Network for Joint Dimensionality Reduction and Classification. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	3.1	0