Witold Pedrycz

List of Publications by Year
in descending order

735 papers	26,741 citations	10986 71 h-index	13379 130 g-index
812 all docs	812 docs citations	812 times ranked	11978 citing authors

#	Article	IF	Citations
1	A fuzzy extension of Saaty's priority theory. Fuzzy Sets and Systems, 1983, 11, 229-241.	2.7	2,136
2	An Introduction to Fuzzy Sets. , 1998, , .		775
3	Why triangular membership functions?. Fuzzy Sets and Systems, 1994, 64, 21-30.	2.7	699
4	A review of soft consensus models in a fuzzy environment. Information Fusion, 2014, 17, 4-13.	19.1	562
5	An identification algorithm in fuzzy relational systems. Fuzzy Sets and Systems, 1984, 13, 153-167.	2.7	516
6	A model of granular data: a design problem with the Tchebyschev FCM. Soft Computing, 2005, 9, 155-163.	3.6	449
7	Granular Computing: Perspectives and Challenges. IEEE Transactions on Cybernetics, 2013, 43, 1977-1989.	9.5	448
8	Genetic learning of fuzzy cognitive maps. Fuzzy Sets and Systems, 2005, 153, 371-401.	2.7	416
9	Granular Computing. , 2003, , .		317
10	Kernel-based fuzzy clustering and fuzzy clustering: A comparative experimental study. Fuzzy Sets and Systems, 2010, 161, 522-543.	2.7	301
11	Building the fundamentals of granular computing: A principle of justifiable granularity. Applied Soft Computing Journal, 2013, 13, 4209-4218.	7.2	296
12	Fuzzy clustering with partial supervision. IEEE Transactions on Systems, Man, and Cybernetics, 1997, 27, 787-795.	5.0	293
13	Conditional Fuzzy C-Means. Pattern Recognition Letters, 1996, 17, 625-631.	4.2	259
14	Toward a Theory of Granular Computing for Human-Centered Information Processing. IEEE Transactions on Fuzzy Systems, 2008, 16, 320-330.	9.8	251
15	Collaborative fuzzy clustering. Pattern Recognition Letters, 2002, 23, 1675-1686.	4.2	248
16	A method based on PSO and granular computing of linguistic information to solve group decision making problems defined in heterogeneous contexts. European Journal of Operational Research, 2013, 230, 624-633.	5.7	235
17	Analytic Hierarchy Process (AHP) in Group Decision Making and its Optimization With an Allocation of Information Granularity. IEEE Transactions on Fuzzy Systems, 2011, 19, 527-539.	9.8	233
18	A Study on Relationship Between Generalization Abilities and Fuzziness of Base Classifiers in Ensemble Learning. IEEE Transactions on Fuzzy Systems, 2015, 23, 1638-1654.	9.8	218

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19	Selecting Discrete and Continuous Features Based on Neighborhood Decision Error Minimization. IEEE Transactions on Systems, Man, and Cybernetics, 2010, 40, 137-150.	5.0	204
20	Fuzzy clustering of time series data using dynamic time warping distance. Engineering Applications of Artificial Intelligence, 2015, 39, 235-244.	8.1	204
21	Solving Fuzzy Job-Shop Scheduling Problem Using DE Algorithm Improved by a Selection Mechanism. IEEE Transactions on Fuzzy Systems, 2020, 28, 3265-3275.	9.8	203
22	Gaussian kernel based fuzzy rough sets: Model, uncertainty measures and applications. International Journal of Approximate Reasoning, 2010, 51, 453-471.	3.3	198
23	An Optimization of Allocation of Information Granularity in the Interpretation of Data Structures: Toward Granular Fuzzy Clustering. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 582-590.	5.0	197
24	Building consensus in group decision making with an allocation of information granularity. Fuzzy Sets and Systems, 2014, 255, 115-127.	2.7	196
25	Fuzzy neural networks and neurocomputations. Fuzzy Sets and Systems, 1993, 56, 1-28.	2.7	193
26	A Novel Framework for Imputation of Missing Values in Databases. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2007, 37, 692-709.	2.9	169
27	Fuzzy Monte Carlo Simulation and Risk Assessment in Construction. Computer-Aided Civil and Infrastructure Engineering, 2010, 25, 238-252.	9.8	167
28	Numerical and Linguistic Prediction of Time Series With the Use of Fuzzy Cognitive Maps. IEEE Transactions on Fuzzy Systems, 2008, 16, 61-72.	9.8	158
29	Allocation of information granularity in optimization and decision-making models: Towards building the foundations of Granular Computing. European Journal of Operational Research, 2014, 232, 137-145.	5.7	155
30	Polynomial neural networks architecture: analysis and design. Computers and Electrical Engineering, 2003, 29, 703-725.	4.8	148
31	Kernelized Fuzzy Rough Sets and Their Applications. IEEE Transactions on Knowledge and Data Engineering, 2011, 23, 1649-1667.	5.7	146
32	Granular clustering: a granular signature of data. IEEE Transactions on Systems, Man, and Cybernetics, 2002, 32, 212-224.	5.0	144
33	Multidirectional Prediction Approach for Dynamic Multiobjective Optimization Problems. IEEE Transactions on Cybernetics, 2019, 49, 3362-3374.	9.5	144
34	The design of self-organizing Polynomial Neural Networks. Information Sciences, 2002, 141, 237-258.	6.9	143
35	A survey of defuzzification strategies. International Journal of Intelligent Systems, 2001, 16, 679-695.	5.7	141
36	Collaborative clustering with the use of Fuzzy C-Means and its quantification. Fuzzy Sets and Systems, 2008, 159, 2399-2427.	2.7	137

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37	Solving Multiobjective Fuzzy Job-Shop Scheduling Problem by a Hybrid Adaptive Differential Evolution Algorithm. IEEE Transactions on Industrial Informatics, 2022, 18, 8519-8528.	11.3	128
38	Granular neural networks. Neurocomputing, 2001, 36, 205-224.	5.9	127
39	From fuzzy sets to shadowed sets: Interpretation and computing. International Journal of Intelligent Systems, 2009, 24, 48-61.	5.7	124
40	Fuzzy computing for data mining. Proceedings of the IEEE, 1999, 87, 1575-1600.	21.3	120
41	Applications of fuzzy relational equations for methods of reasoning in presence of fuzzy data. Fuzzy Sets and Systems, 1985, 16, 163-175.	2.7	115
42	Fuzzy Regression Transfer Learning in Takagiâ€"Sugeno Fuzzy Models. IEEE Transactions on Fuzzy Systems, 2017, 25, 1795-1807.	9.8	113
43	Linguistic models as a framework of user-centric system modeling. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2006, 36, 727-745.	2.9	111
44	Large-Scale Multimodality Attribute Reduction With Multi-Kernel Fuzzy Rough Sets. IEEE Transactions on Fuzzy Systems, 2018, 26, 226-238.	9.8	110
45	Design of interval type-2 fuzzy models through optimal granularity allocation. Applied Soft Computing Journal, 2011, 11, 5590-5601.	7.2	107
46	Granulating linguistic information in decision making under consensus and consistency. Expert Systems With Applications, 2018, 99, 83-92.	7.6	107
47	Hyperplane Assisted Evolutionary Algorithm for Many-Objective Optimization Problems. IEEE Transactions on Cybernetics, 2020, 50, 3367-3380.	9.5	103
48	On Distributed Fuzzy Decision Trees for Big Data. IEEE Transactions on Fuzzy Systems, 2018, 26, 174-192.	9.8	101
49	Uncertainty-Aware Online Scheduling for Real-Time Workflows in Cloud Service Environment. IEEE Transactions on Services Computing, 2021, 14, 1167-1178.	4.6	101
50	Granular computing for data analytics: a manifesto of human-centric computing. IEEE/CAA Journal of Automatica Sinica, 2018, 5, 1025-1034.	13.1	99
51	Key Points Estimation and Point Instance Segmentation Approach for Lane Detection. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 8949-8958.	8.0	98
52	Data description: A general framework of information granules. Knowledge-Based Systems, 2015, 80, 98-108.	7.1	97
53	Fuzzy C-Means clustering of incomplete data based on probabilistic information granules of missing values. Knowledge-Based Systems, 2016, 99, 51-70.	7.1	97
54	The modeling of time series based on fuzzy information granules. Expert Systems With Applications, 2014, 41, 3799-3808.	7.6	92

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55	Clustering Spatiotemporal Data: An Augmented Fuzzy C-Means. IEEE Transactions on Fuzzy Systems, 2013, 21, 855-868.	9.8	90
56	A divide and conquer method for learning large Fuzzy Cognitive Maps. Fuzzy Sets and Systems, 2010, 161, 2515-2532.	2.7	89
57	Cluster-Centric Fuzzy Modeling. IEEE Transactions on Fuzzy Systems, 2014, 22, 1585-1597.	9.8	88
58	Generalized Divergence-based Decision Making Method with an Application to Pattern Classification. IEEE Transactions on Knowledge and Data Engineering, 2022, , 1-1.	5.7	88
59	Optimizing qos routing in hierarchical atm networks using computational intelligence techniques. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2003, 33, 297-312.	2.9	87
60	Evolving Ensemble Fuzzy Classifier. IEEE Transactions on Fuzzy Systems, 2018, 26, 2552-2567.	9.8	84
61	Security Data Collection and Data Analytics in the Internet: A Survey. IEEE Communications Surveys and Tutorials, 2019, 21, 586-618.	39.4	84
62	Time series long-term forecasting model based on information granules and fuzzy clustering. Engineering Applications of Artificial Intelligence, 2015, 41, 17-24.	8.1	83
63	Flexible Linguistic Expressions and Consensus Reaching With Accurate Constraints in Group Decision-Making. IEEE Transactions on Cybernetics, 2020, 50, 2488-2501.	9.5	82
64	Collaborative Fuzzy Clustering Algorithms: Some Refinements and Design Guidelines. IEEE Transactions on Fuzzy Systems, 2012, 20, 444-462.	9.8	80
65	Online Feature Transformation Learning for Cross-Domain Object Category Recognition. IEEE Transactions on Neural Networks and Learning Systems, 2017, 29, 1-15.	11.3	80
66	Identification of fuzzy models using a successive tuning method with a variant identification ratio. Fuzzy Sets and Systems, 2008, 159, 2873-2889.	2.7	79
67	A Development of Fuzzy Encoding and Decoding Through Fuzzy Clustering. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 829-837.	4.7	79
68	Designing Fuzzy Sets With the Use of the Parametric Principle of Justifiable Granularity. IEEE Transactions on Fuzzy Systems, 2016, 24, 489-496.	9.8	78
69	Granular computing with shadowed sets. International Journal of Intelligent Systems, 2002, 17, 173-197.	5.7	77
70	Design of Fuzzy Cognitive Maps for Modeling Time Series. IEEE Transactions on Fuzzy Systems, 2016, 24, 120-130.	9.8	76
71	A Multimodel Prediction Method for Dynamic Multiobjective Evolutionary Optimization. IEEE Transactions on Evolutionary Computation, 2020, 24, 290-304.	10.0	76
72	Data-driven Nonlinear Hebbian Learning method for Fuzzy Cognitive Maps. , 2008, , .		73

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73	Coordinated Planning of Heterogeneous Earth Observation Resources. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2016, 46, 109-125.	9.3	73
74	Approximate Reasoning on a Basis of <italic>Z</italic>-Number-Valued If–Then Rules. IEEE Transactions on Fuzzy Systems, 2017, 25, 1589-1600.	9.8	73
75	Consistency- and Consensus-Based Group Decision-Making Method With Incomplete Probabilistic Linguistic Preference Relations. IEEE Transactions on Fuzzy Systems, 2021, 29, 2565-2579.	9.8	73
76	Extraction of fuzzy rules from fuzzy decision trees: An axiomatic fuzzy sets (AFS) approach. Data and Knowledge Engineering, 2013, 84, 1-25.	3.4	72
77	Fuzzy polynomial neural networks: hybrid architectures of fuzzy modeling. IEEE Transactions on Fuzzy Systems, 2002, 10, 607-621.	9.8	71
78	Evolutionary fuzzy modeling. IEEE Transactions on Fuzzy Systems, 2003, 11, 652-665.	9.8	71
79	P-FCM: a proximity–based fuzzy clustering. Fuzzy Sets and Systems, 2004, 148, 21-41.	2.7	71
80	Induction of Shadowed Sets Based on the Gradual Grade of Fuzziness. IEEE Transactions on Fuzzy Systems, 2013, 21, 937-949.	9.8	71
81	Agile Earth Observation Satellite Scheduling Over 20 Years: Formulations, Methods, and Future Directions. IEEE Systems Journal, 2021, 15, 3881-3892.	4.6	70
82	The Development of Incremental Models. IEEE Transactions on Fuzzy Systems, 2007, 15, 507-518.	9.8	66
83	Granular Fuzzy Regression Domain Adaptation in Takagi–Sugeno Fuzzy Models. IEEE Transactions on Fuzzy Systems, 2018, 26, 847-858.	9.8	66
84	Learning of Fuzzy Cognitive Maps Using Density Estimate. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 900-912.	5.0	65
85	A multiple attribute interval type-2 fuzzy group decision making and its application to supplier selection with extended LINMAP method. Soft Computing, 2017, 21, 3207-3226.	3.6	65
86	C–Fuzzy Decision Trees. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2005, 35, 498-511.	2.9	64
87	Data Clustering with Partial Supervision. Data Mining and Knowledge Discovery, 2006, 12, 47-78.	3.7	64
88	Knowledge transfer in system modeling and its realization through an optimal allocation of information granularity. Applied Soft Computing Journal, 2012, 12, 1985-1995.	7.2	64
89	Data-driven method to learning personalized individual semantics to support linguistic multi-attribute decision making. Omega, 2022, 111, 102642.	5.9	64
90	Granular Mappings. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2005, 35, 292-297.	2.9	63

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91	Vehicle license plate detection using region-based convolutional neural networks. Soft Computing, 2018, 22, 6429-6440.	3.6	63
92	Design of K-means clustering-based polynomial radial basis function neural networks (pRBF NNs) realized with the aid of particle swarm optimization and differential evolution. Neurocomputing, 2012, 78, 121-132.	5.9	62
93	Abstraction and specialization of information granules. IEEE Transactions on Systems, Man, and Cybernetics, 2001, 31, 106-111.	5.0	61
94	Granular Fuzzy Rule-Based Models: A Study in a Comprehensive Evaluation and Construction of Fuzzy Models. IEEE Transactions on Fuzzy Systems, 2017, 25, 1342-1355.	9.8	61
95	Granular Data Description: Designing Ellipsoidal Information Granules. IEEE Transactions on Cybernetics, 2017, 47, 4475-4484.	9.5	59
96	Integrating Continual Personalized Individual Semantics Learning in Consensus Reaching in Linguistic Group Decision Making. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 1525-1536.	9.3	59
97	Two-Echelon Routing Problem for Parcel Delivery by Cooperated Truck and Drone. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 7450-7465.	9.3	59
98	Recursive information granulation: aggregation and interpretation issues. IEEE Transactions on Systems, Man, and Cybernetics, 2003, 33, 96-112.	5.0	58
99	The design of granular classifiers: A study in the synergy of interval calculus and fuzzy sets in pattern recognition. Pattern Recognition, 2008, 41, 3720-3735.	8.1	57
100	A granular-oriented development of functional radial basis function neural networks. Neurocomputing, 2008, 72, 420-435.	5.9	57
101	Anomaly detection in time series data using a fuzzy c-means clustering. , 2013, , .		57
102	Hesitant Fuzzy Maclaurin Symmetric Mean Operators and Its Application to Multiple-Attribute Decision Making. International Journal of Fuzzy Systems, 2015, 17, 509-520.	4.0	57
103	Particle Competition and Cooperation in Networks for Semi-Supervised Learning. IEEE Transactions on Knowledge and Data Engineering, 2012, 24, 1686-1698.	5.7	56
104	The Design of Free Structure Granular Mappings: The Use of the Principle of Justifiable Granularity. IEEE Transactions on Cybernetics, 2013, 43, 2105-2113.	9.5	56
105	The development of granular rule-based systems: a study in structural model compression. Granular Computing, 2017, 2, 1-12.	8.0	56
106	Fuzzy Grey Choquet Integral for Evaluation of Multicriteria Decision Making Problems With Interactive and Qualitative Indices. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, , 1-14.	9.3	55
107	Wavelet Frame-Based Fuzzy C-Means Clustering for Segmenting Images on Graphs. IEEE Transactions on Cybernetics, 2020, 50, 3938-3949.	9.5	55
108	Residual-driven Fuzzy C-Means Clustering for Image Segmentation. IEEE/CAA Journal of Automatica Sinica, 2021, 8, 876-889.	13.1	55

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109	From Fuzzy Cognitive Maps to Granular Cognitive Maps. IEEE Transactions on Fuzzy Systems, 2014, 22, 859-869.	9.8	54
110	Intuitionistic Multiplicative Group Analytic Hierarchy Process and Its Use in Multicriteria Group Decision-Making. IEEE Transactions on Cybernetics, 2018, 48, 1950-1962.	9.5	54
111	Time-series clustering based on linear fuzzy information granules. Applied Soft Computing Journal, 2018, 73, 1053-1067.	7.2	54
112	The design of fuzzy information granules: Tradeoffs between specificity and experimental evidence. Applied Soft Computing Journal, 2009, 9, 264-273.	7.2	52
113	Description and prediction of time series: A general framework of Granular Computing. Expert Systems With Applications, 2015, 42, 4830-4839.	7.6	52
114	Satellite observation scheduling with a novel adaptive simulated annealing algorithm and a dynamic task clustering strategy. Computers and Industrial Engineering, 2017, 113, 576-588.	6.3	52
115	Fuzzy Polynomial Neuron-Based Self-Organizing Neural Networks. International Journal of General Systems, 2003, 32, 237-250.	2.5	51
116	An Empirical Exploration of the Distributions of the Chidamber and Kemerer Object-Oriented Metrics Suite. Empirical Software Engineering, 2005, 10, 81-104.	3.9	51
117	Axiomatic Fuzzy Set Theory and Its Applications. Studies in Fuzziness and Soft Computing, 2009, , .	0.8	51
118	Design of face recognition algorithm using PCA -LDA combined for hybrid data pre-processing and polynomial-based RBF neural networks : Design and its application. Expert Systems With Applications, 2013, 40, 1451-1466.	7.6	51
119	Fuzzy Wavelet Polynomial Neural Networks: Analysis and Design. IEEE Transactions on Fuzzy Systems, 2017, 25, 1329-1341.	9.8	51
120	Clustering Granular Data and Their Characterization With Information Granules of Higher Type. IEEE Transactions on Fuzzy Systems, 2015, 23, 850-860.	9.8	50
121	Regranulation: A granular algorithm enabling communication between granular worlds. Information Sciences, 2007, 177, 408-435.	6.9	49
122	Granular Neural Networks: Concepts and Development Schemes. IEEE Transactions on Neural Networks and Learning Systems, 2013, 24, 542-553.	11.3	49
123	An Adaptive Resource Allocation Strategy for Objective Space Partition-Based Multiobjective Optimization. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2019, , 1-16.	9.3	49
124	A Dynamic Adaptive Subgroup-to-Subgroup Compatibility-Based Conflict Detection and Resolution Model for Multicriteria Large-Scale Group Decision Making. IEEE Transactions on Cybernetics, 2021, 51, 4784-4795.	9.5	48
125	Granular Model of Long-Term Prediction for Energy System in Steel Industry. IEEE Transactions on Cybernetics, 2016, 46, 388-400.	9.5	47
126	Limited Rationality and Its Quantification Through the Interval Number Judgments With Permutations. IEEE Transactions on Cybernetics, 2017, 47, 4025-4037.	9.5	47

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127	Granular worlds: Representation and communication problems. International Journal of Intelligent Systems, 2000, 15, 1015-1026.	5.7	46
128	Logic-oriented neural networks for fuzzy neurocomputing. Neurocomputing, 2009, 73, 10-23.	5.9	46
129	Robust Ultra-High Resolution Microwave Planar Sensor Using Fuzzy Neural Network Approach. IEEE Sensors Journal, 2017, 17, 323-332.	4.7	46
130	A Modified Consensus Model in Group Decision Making With an Allocation of Information Granularity. IEEE Transactions on Fuzzy Systems, 2018, 26, 3182-3187.	9.8	46
131	A Design of Granular Takagiâ€"Sugeno Fuzzy Model Through the Synergy of Fuzzy Subspace Clustering and Optimal Allocation of Information Granularity. IEEE Transactions on Fuzzy Systems, 2018, 26, 2499-2509.	9.8	46
132	Design of hybrid radial basis function neural networks (HRBFNNs) realized with the aid of hybridization of fuzzy clustering method (FCM) and polynomial neural networks (PNNs). Neural Networks, 2014, 60, 166-181.	5.9	45
133	Hierarchical Granular Clustering: An Emergence of Information Granules of Higher Type and Higher Order. IEEE Transactions on Fuzzy Systems, 2015, 23, 2270-2283.	9.8	45
134	Linguistic Distribution and Priority-Based Approximation to Linguistic Preference Relations With Flexible Linguistic Expressions in Decision Making. IEEE Transactions on Cybernetics, 2021, 51, 649-659.	9.5	45
135	Multigranulation Supertrust Model for Attribute Reduction. IEEE Transactions on Fuzzy Systems, 2021, 29, 1395-1408.	9.8	45
136	An approach to measure the robustness of fuzzy reasoning. International Journal of Intelligent Systems, 2005, 20, 393-413.	5.7	44
137	Granular Neural Networks and Their Development Through Context-Based Clustering and Adjustable Dimensionality of Receptive Fields. IEEE Transactions on Neural Networks, 2009, 20, 1604-1616.	4.2	44
138	Models of Mathematical Programming for Intuitionistic Multiplicative Preference Relations. IEEE Transactions on Fuzzy Systems, 2017, 25, 945-957.	9.8	44
139	Design of Reinforced Interval Type-2 Fuzzy C-Means-Based Fuzzy Classifier. IEEE Transactions on Fuzzy Systems, 2018, 26, 3054-3068.	9.8	44
140	Goal Programming Approaches to Managing Consistency and Consensus for Intuitionistic Multiplicative Preference Relations in Group Decision Making. IEEE Transactions on Fuzzy Systems, 2018, 26, 3261-3275.	9.8	44
141	Ensemble Many-Objective Optimization Algorithm Based on Voting Mechanism. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 1716-1730.	9.3	44
142	Granular computing: an introduction. , 0, , .		43
143	Design of fuzzy radial basis function-based polynomial neural networks. Fuzzy Sets and Systems, 2011, 185, 15-37.	2.7	43
144	Granular Models and Granular Outliers. IEEE Transactions on Fuzzy Systems, 2018, 26, 3835-3846.	9.8	43

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145	Fuzzy Rule-Based Domain Adaptation in Homogeneous and Heterogeneous Spaces. IEEE Transactions on Fuzzy Systems, 2019, 27, 348-361.	9.8	43
146	Output Feedback Model Predictive Control of Interval Type-2 Tâ€"S Fuzzy System With Bounded Disturbance. IEEE Transactions on Fuzzy Systems, 2020, 28, 148-162.	9.8	43
147	Estimating incomplete information in group decision making: A framework of granular computing. Applied Soft Computing Journal, 2020, 86, 105930.	7.2	43
148	Granularity and Entropy of Intuitionistic Fuzzy Information and Their Applications. IEEE Transactions on Cybernetics, 2022, 52, 192-204.	9.5	43
149	Introducing WIREs Data Mining and Knowledge Discovery. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery, 2011, 1, 1-1.	6.8	42
150	Granular fuzzy models: a study in knowledge management in fuzzy modeling. International Journal of Approximate Reasoning, 2012, 53, 1061-1079.	3.3	42
151	Cost-Sensitive Weighting and Imbalance-Reversed Bagging for Streaming Imbalanced and Concept Drifting in Electricity Pricing Classification. IEEE Transactions on Industrial Informatics, 2019, 15, 1588-1597.	11.3	42
152	Relational and directional aspects in the construction of information granules. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2002, 32, 605-614.	2.9	41
153	From numeric data to information granules: A design through clustering and the principle of justifiable granularity. Knowledge-Based Systems, 2016, 101, 100-113.	7.1	41
154	Fuzzy clustering with nonlinearly transformed data. Applied Soft Computing Journal, 2017, 61, 364-376.	7.2	41
155	Granular Encoders and Decoders: A Study in Processing Information Granules. IEEE Transactions on Fuzzy Systems, 2017, 25, 1115-1126.	9.8	41
156	Fuzzy classifiers with information granules in feature space and logic-based computing. Pattern Recognition, 2018, 80, 156-167.	8.1	41
157	Heterogeneous Fuzzy Logic Networks: Fundamentals and Development Studies. IEEE Transactions on Neural Networks, 2004, 15, 1466-1481.	4.2	40
158	Hidden Markov Models Based Approaches to Long-Term Prediction for Granular Time Series. IEEE Transactions on Fuzzy Systems, 2018, 26, 2807-2817.	9.8	40
159	Efficient transaction deleting approach of pre-large based high utility pattern mining in dynamic databases. Future Generation Computer Systems, 2020, 103, 58-78.	7.5	40
160	Generating a hierarchical fuzzy rule-based model. Fuzzy Sets and Systems, 2020, 381, 124-139.	2.7	40
161	A Generic Markov Decision Process Model and Reinforcement Learning Method for Scheduling Agile Earth Observation Satellites. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 1463-1474.	9.3	40
162	Determining Three-Way Decisions With Decision-Theoretic Rough Sets Using a Relative Value Approach. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2017, 47, 1785-1799.	9.3	39

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163	An axiomatic approach to approximation-consistency of triangular fuzzy reciprocal preference relations. Fuzzy Sets and Systems, 2017, 322, 1-18.	2.7	39
164	Multiple Relevant Feature Ensemble Selection Based on Multilayer Co-Evolutionary Consensus MapReduce. IEEE Transactions on Cybernetics, 2020, 50, 425-439.	9.5	39
165	Granular Data Aggregation: An Adaptive Principle of the Justifiable Granularity Approach. IEEE Transactions on Cybernetics, 2019, 49, 417-426.	9.5	38
166	Big Data Processing Workflows Oriented Real-Time Scheduling Algorithm using Task-Duplication in Geo-Distributed Clouds. IEEE Transactions on Big Data, 2020, 6, 131-144.	6.1	38
167	Towards hybrid clustering approach to data classification: Multiple kernels based interval-valued Fuzzy C-Means algorithms. Fuzzy Sets and Systems, 2015, 279, 17-39.	2.7	37
168	A Consistency and Consensus-Based Goal Programming Method for Group Decision-Making With Interval-Valued Intuitionistic Multiplicative Preference Relations. IEEE Transactions on Cybernetics, 2019, 49, 3640-3654.	9.5	37
169	Granular data imputation: A framework of Granular Computing. Applied Soft Computing Journal, 2016, 46, 307-316.	7.2	36
170	Clustering Homogeneous Granular Data: Formation and Evaluation. IEEE Transactions on Cybernetics, 2019, 49, 1391-1402.	9.5	36
171	Parallel Learning of Large Fuzzy Cognitive Maps. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	35
172	Genetic interval neural networks for granular data regression. Information Sciences, 2014, 257, 313-330.	6.9	35
173	Optimized face recognition algorithm using radial basis function neural networks and its practical applications. Neural Networks, 2015, 69, 111-125.	5.9	35
174	Clustering method for production of Z-number based if-then rules. Information Sciences, 2020, 520, 155-176.	6.9	35
175	A study in facial features saliency in face recognition: an analytic hierarchy process approach. Soft Computing, 2017, 21, 7503-7517.	3.6	34
176	Building Trend Fuzzy Granulation-Based LSTM Recurrent Neural Network for Long-Term Time-Series Forecasting. IEEE Transactions on Fuzzy Systems, 2022, 30, 1599-1613.	9.8	34
177	Granular computing in the development of fuzzy controllers. International Journal of Intelligent Systems, 1999, 14, 419-447.	5.7	33
178	Self-organizing polynomial neural networks based on polynomial and fuzzy polynomial neurons: analysis and design. Fuzzy Sets and Systems, 2004, 142, 163-198.	2.7	33
179	Fuzzy granular classification based on the principle of justifiable granularity. Knowledge-Based Systems, 2019, 170, 89-101.	7.1	33
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181	Interval Dominance-Based Feature Selection for Interval-Valued Ordered Data. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 6898-6912.	11.3	33
182	On the sensitivity of COCOMO II software cost estimation model. , 0, , .		32
183	Fundamentals of Fuzzy Clustering. , 0, , 1-30.		32
184	Hybrid Fuzzy Wavelet Neural Networks Architecture Based on Polynomial Neural Networks and Fuzzy Set/Relation Inference-Based Wavelet Neurons. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 3452-3462.	11.3	32
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