

# Witold Pedrycz

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

96  
papers

4,756  
citations

33  
h-index

68  
g-index

99  
ext. papers

5,504  
ext. citations

4.8  
avg. IF

6.11  
L-index

#	Paper	IF	Citations
96	Why triangular membership functions?. <i>Fuzzy Sets and Systems</i> , <b>1994</b> , 64, 21-30	3.7	534
95	A review of soft consensus models in a fuzzy environment. <i>Information Fusion</i> , <b>2014</b> , 17, 4-13	16.7	433
94	An identification algorithm in fuzzy relational systems. <i>Fuzzy Sets and Systems</i> , <b>1984</b> , 13, 153-167	3.7	403
93	Genetic learning of fuzzy cognitive maps. <i>Fuzzy Sets and Systems</i> , <b>2005</b> , 153, 371-401	3.7	337
92	Building consensus in group decision making with an allocation of information granularity. <i>Fuzzy Sets and Systems</i> , <b>2014</b> , 255, 115-127	3.7	158
91	On identification in fuzzy systems and its applications in control problems. <i>Fuzzy Sets and Systems</i> , <b>1981</b> , 6, 73-83	3.7	151
90	Triangular fuzzy decision-theoretic rough sets. <i>International Journal of Approximate Reasoning</i> , <b>2013</b> , 54, 1087-1106	3.6	145
89	Identification of fuzzy systems by means of an auto-tuning algorithm and its application to nonlinear systems. <i>Fuzzy Sets and Systems</i> , <b>2000</b> , 115, 205-230	3.7	131
88	Numerical and applicational aspects of fuzzy relational equations. <i>Fuzzy Sets and Systems</i> , <b>1983</b> , 11, 1-18	3.7	126
87	An optimization of allocation of information granularity in the interpretation of data structures: toward granular fuzzy clustering. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , <b>2012</b> , 42, 582-90		124
86	Polynomial neural networks architecture: analysis and design. <i>Computers and Electrical Engineering</i> , <b>2003</b> , 29, 703-725	4.3	121
85	Numerical and Linguistic Prediction of Time Series With the Use of Fuzzy Cognitive Maps. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2008</b> , 16, 61-72	8.3	120
84	The design of self-organizing Polynomial Neural Networks. <i>Information Sciences</i> , <b>2002</b> , 141, 237-258	7.7	117
83	Fuzzy relational equations with generalized connectives and their applications. <i>Fuzzy Sets and Systems</i> , <b>1983</b> , 10, 185-201	3.7	93
82	Granulating linguistic information in decision making under consensus and consistency. <i>Expert Systems With Applications</i> , <b>2018</b> , 99, 83-92	7.8	86
81	A divide and conquer method for learning large Fuzzy Cognitive Maps. <i>Fuzzy Sets and Systems</i> , <b>2010</b> , 161, 2515-2532	3.7	78
80	Hybrid identification in fuzzy-neural networks. <i>Fuzzy Sets and Systems</i> , <b>2003</b> , 138, 399-426	3.7	68

79	Cluster-Centric Fuzzy Modeling. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2014</b> , 22, 1585-1597	8.3	67
78	A Development of Fuzzy Encoding and Decoding Through Fuzzy Clustering. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2008</b> , 57, 829-837	5.2	62
77	Design of Fuzzy Cognitive Maps for Modeling Time Series. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2016</b> , 24, 120-130	8.3	61
76	The modeling and prediction of time series based on synergy of high-order fuzzy cognitive map and fuzzy c-means clustering. <i>Knowledge-Based Systems</i> , <b>2014</b> , 70, 242-255	7.3	61
75	The design of cognitive maps: A study in synergy of granular computing and evolutionary optimization. <i>Expert Systems With Applications</i> , <b>2010</b> , 37, 7288-7294	7.8	60
74	Identification of fuzzy models using a successive tuning method with a variant identification ratio. <i>Fuzzy Sets and Systems</i> , <b>2008</b> , 159, 2873-2889	3.7	59
73	Approximate solutions of fuzzy relational equations. <i>Fuzzy Sets and Systems</i> , <b>1988</b> , 28, 183-202	3.7	57
72	Data-driven Nonlinear Hebbian Learning method for Fuzzy Cognitive Maps <b>2008</b> ,		55
71	The Development of Incremental Models. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2007</b> , 15, 507-518	8.3	54
70	Learning of fuzzy cognitive maps using density estimate. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , <b>2012</b> , 42, 900-12		51
69	Hesitant Fuzzy Maclaurin Symmetric Mean Operators and Its Application to Multiple-Attribute Decision Making. <i>International Journal of Fuzzy Systems</i> , <b>2015</b> , 17, 509-520	3.6	48
68	Fuzzy Polynomial Neuron-Based Self-Organizing Neural Networks. <i>International Journal of General Systems</i> , <b>2003</b> , 32, 237-250	2.1	47
67	From Fuzzy Cognitive Maps to Granular Cognitive Maps. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2014</b> , 22, 859-869	8.3	44
66	Granular Data Description: Designing Ellipsoidal Information Granules. <i>IEEE Transactions on Cybernetics</i> , <b>2017</b> , 47, 4475-4484	10.2	43
65	Consensus mechanism with maximum-return modifications and minimum-cost feedback: A perspective of game theory. <i>European Journal of Operational Research</i> , <b>2020</b> , 287, 546-559	5.6	43
64	Fuzzy cognitive maps in the modeling of granular time series. <i>Knowledge-Based Systems</i> , <b>2017</b> , 115, 110-122	7.2	40
63	Fuzzy vector quantization with the particle swarm optimization: A study in fuzzy granulation-degranulation information processing. <i>Signal Processing</i> , <b>2007</b> , 87, 2061-2074	4.4	33
62	A Competent Memetic Algorithm for Learning Fuzzy Cognitive Maps. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2015</b> , 23, 2397-2411	8.3	32

61	An axiomatic approach to approximation-consistency of triangular fuzzy reciprocal preference relations. <i>Fuzzy Sets and Systems</i> , <b>2017</b> , 322, 1-18	3.7	31
60	. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2017</b> , 25, 1115-1126	8.3	31
59	Self-organizing polynomial neural networks based on polynomial and fuzzy polynomial neurons: analysis and design. <i>Fuzzy Sets and Systems</i> , <b>2004</b> , 142, 163-198	3.7	30
58	Parallel Learning of Large Fuzzy Cognitive Maps. <i>Neural Networks (IJCNN), International Joint Conference on</i> , <b>2007</b> ,		29
57	Expert-Based and Computational Methods for Developing Fuzzy Cognitive Maps. <i>Studies in Fuzziness and Soft Computing</i> , <b>2010</b> , 23-41	0.7	28
56	Hybrid fuzzy set-based polynomial neural networks and their development with the aid of genetic optimization and information granulation. <i>Applied Soft Computing Journal</i> , <b>2009</b> , 9, 1068-1089	7.5	28
55	Fuzzy Radial Basis Function Neural Networks with information granulation and its parallel genetic optimization. <i>Fuzzy Sets and Systems</i> , <b>2014</b> , 237, 96-117	3.7	27
54	Structural and parametric design of fuzzy inference systems using hierarchical fair competition-based parallel genetic algorithms and information granulation. <i>International Journal of Approximate Reasoning</i> , <b>2008</b> , 49, 631-648	3.6	27
53	Estimating incomplete information in group decision making: A framework of granular computing. <i>Applied Soft Computing Journal</i> , <b>2020</b> , 86, 105930	7.5	26
52	Multiobjective and multiattribute decision making in a fuzzy environment and their power engineering applications. <i>Information Sciences</i> , <b>2016</b> , 361-362, 100-119	7.7	25
51	HYBRID FUZZY POLYNOMIAL NEURAL NETWORKS. <i>International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems</i> , <b>2002</b> , 10, 257-280	0.8	24
50	Granular Representation of Data: A Design of Families of $\alpha$ -Information Granules. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2018</b> , 26, 2107-2119	8.3	23
49	Multi-layer hybrid fuzzy polynomial neural networks: a design in the framework of computational intelligence. <i>Neurocomputing</i> , <b>2005</b> , 64, 397-431	5.4	21
48	Evolutionary design of hybrid self-organizing fuzzy polynomial neural networks with the aid of information granulation. <i>Expert Systems With Applications</i> , <b>2007</b> , 33, 830-846	7.8	20
47	Consistency and consensus-driven models to personalize individual semantics of linguistic terms for supporting group decision making with distribution linguistic preference relations. <i>Knowledge-Based Systems</i> , <b>2020</b> , 189, 105078	7.3	20
46	A gradient-descent-based approach for transparent linguistic interface generation in fuzzy models. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , <b>2010</b> , 40, 1219-30		19
45	Linguistic Distribution and Priority-Based Approximation to Linguistic Preference Relations With Flexible Linguistic Expressions in Decision Making. <i>IEEE Transactions on Cybernetics</i> , <b>2021</b> , 51, 649-659	10.2	18
44	Genetic optimization-driven multi-layer hybrid fuzzy neural networks. <i>Simulation Modelling Practice and Theory</i> , <b>2006</b> , 14, 597-613	3.9	16

43	Hybrid identification of fuzzy rule-based models. <i>International Journal of Intelligent Systems</i> , <b>2002</b> , 17, 77	8.4	15
42	Implicit rule-based fuzzy-neural networks using the identification algorithm of GA hybrid scheme based on information granulation. <i>Advanced Engineering Informatics</i> , <b>2002</b> , 16, 247-263	7.4	14
41	Genetic Optimization of Fuzzy Polynomial Neural Networks. <i>IEEE Transactions on Industrial Electronics</i> , <b>2007</b> , 54, 2219-2238	8.9	12
40	Identification of fuzzy relation models using hierarchical fair competition-based parallel genetic algorithms and information granulation. <i>Applied Mathematical Modelling</i> , <b>2009</b> , 33, 2791-2807	4.5	11
39	Hybrid fuzzy polynomial neural networks with the aid of weighted fuzzy clustering method and fuzzy polynomial neurons. <i>Applied Intelligence</i> , <b>2017</b> , 46, 487-508	4.9	10
38	Efficient mining product-based fuzzy association rules through central limit theorem. <i>Applied Soft Computing Journal</i> , <b>2018</b> , 63, 235-248	7.5	10
37	Flexibility Degree of Fuzzy Numbers and its Implication to a Group-Decision-Making Model. <i>IEEE Transactions on Cybernetics</i> , <b>2019</b> , 49, 4054-4065	10.2	9
36	Relevancy of fuzzy models. <i>Information Sciences</i> , <b>1990</b> , 52, 285-302	7.7	9
35	A genetic approach to modeling fuzzy systems based on information granulation and successive generation-based evolution method. <i>Simulation Modelling Practice and Theory</i> , <b>2007</b> , 15, 1128-1145	3.9	7
34	Fuzzy Relation-Based Neural Networks and Their Hybrid Identification. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2007</b> , 56, 2522-2537	5.2	7
33	PROCESSING OF FUZZY NUMBERS BY FUZZY RELATION EQUATIONS. <i>Kybernetes</i> , <b>1986</b> , 15, 43-47	2	7
32	Structural developments of fuzzy systems with the aid of information granulation. <i>Simulation Modelling Practice and Theory</i> , <b>2007</b> , 15, 1292-1309	3.9	6
31	The Learning of Fuzzy Cognitive Maps With Noisy Data: A Rapid and Robust Learning Method With Maximum Entropy. <i>IEEE Transactions on Cybernetics</i> , <b>2021</b> , 51, 2080-2092	10.2	6
30	Maximum Fuzzy Consensus Feedback Mechanism With Minimum Cost and Private Interest in Group Decision-Making. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2020</b> , 1-1	8.3	4
29	The design of self-organizing neural networks based on PNs and FPNs with the aid of genetic optimization and extended GMDH method. <i>International Journal of Approximate Reasoning</i> , <b>2006</b> , 43, 26-58	3.6	4
28	On the suitability of fuzzy models: an evaluation through fuzzy integrals. <i>International Journal of Man-Machine Studies</i> , <b>1986</b> , 24, 141-151		4
27	Fast and Effective Learning for Fuzzy Cognitive Maps: A Method Based on Solving Constrained Convex Optimization Problems. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2020</b> , 28, 2958-2971	8.3	4
26	Granular Cognitive Maps reconstruction <b>2014</b> ,		3

25	Improving Consensus in Group Decision Making with Intuitionistic Reciprocal Preference Relations: A Granular Computing Approach <b>2018</b> ,		3
24	A Linguistic Information Granulation Model and Its Penalty Function-Based Co-Evolutionary PSO Solution Approach for Supporting GDM with Distributed Linguistic Preference Relations. <i>Information Fusion</i> , <b>2022</b> , 77, 118-132	16.7	3
23	Fuzzy relational structures: Learning alternatives for fuzzy modeling <b>2013</b> ,		2
22	Robust Multi-Linear Fuzzy SVR Designed With the Aid of Fuzzy C-Means Clustering Based on Insensitive Data Information. <i>IEEE Access</i> , <b>2020</b> , 8, 184997-185011	3.5	2
21	Modeling of the ship steady turning motion based on multiblocks of fuzzy cognitive maps. <i>Applied Ocean Research</i> , <b>2021</b> , 110, 102604	3.4	2
20	Group Decision Making Based on Flexibility Degree of Fuzzy Numbers Under a Confidence Level. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2021</b> , 29, 1640-1653	8.3	2
19	Efficiency evaluation with regret-rejoice cross-efficiency DEA models under the distributed linguistic environment. <i>Computers and Industrial Engineering</i> , <b>2022</b> , 169, 108281	6.4	2
18	. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2020</b> , 1-1	8.3	1
17	Genetically Optimized Hybrid Fuzzy Neural Networks Based on Simplified Fuzzy Inference Rules and Polynomial Neurons. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 798-803	0.9	1
16	Associations Among Information Granules and Their Optimization in Granulation-Degrgranulation Mechanism of Granular Computing. <i>International Journal of Fuzzy Logic and Intelligent Systems</i> , <b>2013</b> , 13, 245-253	1.8	1
15	Information Granulation-Based Multi-layer Hybrid Fuzzy Neural Networks: Analysis and Design. <i>Lecture Notes in Computer Science</i> , <b>2004</b> , 188-195	0.9	1
14	Semantics and Perception of Fuzzy Sets and Fuzzy Mappings. <i>Studies in Computational Intelligence</i> , <b>2008</b> , 597-639	0.8	1
13	Designing of higher order information granules through clustering heterogeneous granular data. <i>Applied Soft Computing Journal</i> , <b>2021</b> , 112, 107820	7.5	1
12	Optimization of Information Granulation-Oriented Fuzzy Set Model Using Hierarchical Fair Competition-Based Parallel Genetic Algorithms. <i>Lecture Notes in Computer Science</i> , <b>2006</b> , 477-486	0.9	1
11	Design Methodologies of Fuzzy Set-Based Fuzzy Model Based on GAs and Information Granulation. <i>Lecture Notes in Computer Science</i> , <b>2006</b> , 100-109	0.9	1
10	Hybrid fuzzy multiple SVM classifier through feature fusion based on convolution neural networks and its practical applications. <i>Expert Systems With Applications</i> , <b>2022</b> , 202, 117392	7.8	0
9	Optimization of Fuzzy Systems Based on Fuzzy Set Using Genetic Optimization and Information Granulation. <i>Lecture Notes in Computer Science</i> , <b>2005</b> , 316-327	0.9	
8	The Design of Genetically Optimized Self-Organizing Neural Networks with Polynomial and Fuzzy Polynomial Neurons. <i>Circuits, Systems, and Signal Processing</i> , <b>2005</b> , 24, 267-286	2.2	

- 7 Genetically Optimized Hybrid Fuzzy Neural Networks with the Aid of TSK Fuzzy Inference Rules and Polynomial Neural Networks. *Lecture Notes in Computer Science*, **2005**, 407-415 0.9
- 6 Identification of Fuzzy Set-Based Fuzzy Systems by Means of Data Granulation and Genetic Optimization **2007**, 1076-1085
- 5 Genetically Optimized Self-Organizing Neural Networks Based on PNs and FPNs. *Lecture Notes in Computer Science*, **2004**, 156-161 0.9
- 4 Methodological Identification of Information Granules-Based Fuzzy Systems by Means of Genetic Optimization. *Lecture Notes in Computer Science*, **2006**, 467-476 0.9
- 3 Applications: Granular Models, Granular Classifiers and Fuzzy Cognitive Maps. *Intelligent Systems Reference Library*, **2021**, 249-269 0.8
- 2 Granulation-Degranulation Processes. *Intelligent Systems Reference Library*, **2021**, 161-173 0.8
- 1 Automatic Data Understanding. *Advances in Intelligent Systems and Computing*, **2015**, 217-228 0.4