Luciano Sanchez

List of Publications by Year
in descending order

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144 papers	3,438 citations	236612 25 h-index	155451 55 g-index
151 all docs	151 docs citations	151 times ranked	2310 citing authors

#	Article	IF	Citations
1	KEEL: a software tool to assess evolutionary algorithms for data mining problems. Soft Computing, 2009, 13, 307-318.	2.1	1,165
2	KEEL 3.0: An Open Source Software for Multi-Stage Analysis in Data Mining. International Journal of Computational Intelligence Systems, 2017, 10, 1238.	1.6	201
3	Lithium-Ion Battery Degradation Indicators Via Incremental Capacity Analysis. IEEE Transactions on Industry Applications, 2019, 55, 2992-3002.	3.3	127
4	Induction of Fuzzy-Rule-Based Classifiers With Evolutionary Boosting Algorithms. IEEE Transactions on Fuzzy Systems, 2004, 12, 296-308.	6.5	114
5	Combining GP operators with SA search to evolve fuzzy rule based classifiers. Information Sciences, 2001, 136, 175-191.	4.0	113
6	Solving Electrical Distribution Problems Using Hybrid Evolutionary Data Analysis Techniques. Applied Intelligence, 1999, 10, 5-24.	3.3	91
7	Genetic learning of fuzzy rules based on low quality data. Fuzzy Sets and Systems, 2009, 160, 2524-2552.	1.6	89
8	Higher order models for fuzzy random variables. Fuzzy Sets and Systems, 2008, 159, 237-258.	1.6	73
9	Similarity and dissimilarity measures between fuzzy sets: A formal relational study. Information Sciences, 2013, 229, 122-141.	4.0	71
10	Advocating the Use of Imprecisely Observed Data in Genetic Fuzzy Systems. IEEE Transactions on Fuzzy Systems, 2007, 15, 551-562.	6.5	66
11	Induction of descriptive fuzzy classifiers with the Logitboost algorithm. Soft Computing, 2006, 10, 825-835.	2.1	63
12	Hyper-parameter selection in deep neural networks using parallel particle swarm optimization. , 2017, , .		56
13	Mutual information-based feature selection and partition design in fuzzy rule-based classifiers from vague data. International Journal of Approximate Reasoning, 2008, 49, 607-622.	1.9	46
14	Diagnosis of dyslexia with low quality data with genetic fuzzy systems. International Journal of Approximate Reasoning, 2010, 51, 993-1009.	1.9	43
15	Variational encoding approach for interpretable assessment of remaining useful life estimation. Reliability Engineering and System Safety, 2022, 222, 108353.	5.1	40
16	Upper and lower probabilities induced by a fuzzy random variable. Fuzzy Sets and Systems, 2011, 165, 1-23.	1.6	39
17	Boosting fuzzy rules in classification problems under single-winner inference. International Journal of Intelligent Systems, 2007, 22, 1021-1034.	3.3	36
18	Genetic learning of the membership functions for mining fuzzy association rules from low quality data. Information Sciences, 2015, 295, 358-378.	4.0	36

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19	Random Sets and Random Fuzzy Sets as Ill-Perceived Random Variables. SpringerBriefs in Applied Sciences and Technology, 2014, , .	0.2	36
20	A Genetic Fuzzy Linguistic Combination Method for Fuzzy Rule-Based Multiclassifiers. IEEE Transactions on Fuzzy Systems, 2013, 21, 950-965.	6.5	34
21	Modeling Vague Data with Genetic Fuzzy Systems under a Combination of Crisp and Imprecise Criteria. , 2007, , .		32
22	Obtaining linguistic fuzzy rule-based regression models from imprecise data with multiobjective genetic algorithms. Soft Computing, 2009, 13, 467-479.	2.1	30
23	Interval-valued GA-P algorithms. IEEE Transactions on Evolutionary Computation, 2000, 4, 64-72.	7.5	29
24	Assessing the Health of LiFePO4 Traction Batteries through Monotonic Echo State Networks. Sensors, 2018, 18, 9.	2.1	29
25	An Equivalent Circuit Model With Variable Effective Capacity for <inline-formula> <tex-math notation="TeX">$hbox{LiFePO}_{4}$</tex-math></inline-formula> Batteries. IEEE Transactions on Vehicular Technology, 2014, 63, 3592-3599.	3.9	26
26	A design methodology for semi-physical fuzzy models applied to the dynamic characterization of LiFePO4 batteries. Applied Soft Computing Journal, 2014, 14, 269-288.	4.1	26
27	Some relationships between fuzzy and random set-based classifiers and models. International Journal of Approximate Reasoning, 2002, 29, 175-213.	1.9	25
28	Obtaining transparent models of chaotic systems with multi-objective simulated annealing algorithms. Information Sciences, 2008, 178, 952-970.	4.0	25
29	Extending a simple genetic cooperative-competitive learning fuzzy classifier to low quality datasets. Evolutionary Intelligence, 2009, 2, 73-84.	2.3	25
30	An extension of the FURIA classification algorithm to low quality data through fuzzy rankings and its application to the early diagnosis of dyslexia. Neurocomputing, 2016, 176, 60-71.	3.5	24
31	A random sets-based method for identifying fuzzy models. Fuzzy Sets and Systems, 1998, 98, 343-354.	1.6	23
32	Multiobjective genetic classifier selection for random oracles fuzzy rule-based classifier ensembles: How beneficial is the additional diversity?. Knowledge-Based Systems, 2013, 54, 3-21.	4.0	22
33	A Variable Effective Capacity Model for <inline-formula> <tex-math notation="TeX">$hbox{LiFePO}_{4}$</tex-math></inline-formula> Traction Batteries Using Computational Intelligence Techniques. IEEE Transactions on Industrial Electronics, 2015, 62, 555-563.	5.2	21
34	Imprecise distribution function associated to a random set. Information Sciences, 2004, 159, 109-123.	4.0	20
35	Health assessment of LFP automotive batteries using a fractional-order neural network. Neurocomputing, 2020, 391, 345-354.	3.5	20
36	Linguistic cost-sensitive learning of genetic fuzzy classifiers for imprecise data. International Journal of Approximate Reasoning, 2011, 52, 841-862.	1.9	18

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37	Machine learning models, epistemic set-valued data and generalized loss functions: An encompassing approach. Information Sciences, 2016, 358-359, 129-150.	4.0	18
38	Fuzzy random variables-based modeling with GA-P algorithms. , 2000, , 245-256.		17
39	Effect of crossbreeding with <scp>L</scp>imousine, <scp>R</scp>ubia <scp>G</scp>allega and <scp>B</scp>elgium <scp>B</scp>lue on meat quality and fatty acid profile of <scp>H</scp>olstein calves. Animal Science Journal, 2015, 86, 913-921.	0.6	15
40	Mark-recapture techniques in statistical tests for imprecise data. International Journal of Approximate Reasoning, 2011, 52, 240-260.	1.9	14
41	Sequential pattern mining applied to aeroengine condition monitoring with uncertain health data. Engineering Applications of Artificial Intelligence, 2015, 44, 10-24.	4.3	14
42	Additive similarity and dissimilarity measures. Fuzzy Sets and Systems, 2017, 322, 35-53.	1.6	14
43	A class of Monotone Fuzzy rule-based Wiener systems with an application to Li-ion battery modelling. Engineering Applications of Artificial Intelligence, 2017, 64, 367-377.	4.3	14
44	Energy-efficient allocation of computing node slots in HPC clusters through parameter learning and hybrid genetic fuzzy system modeling. Journal of Supercomputing, 2015, 71, 1163-1174.	2.4	13
45	A fast genetic method for inducting descriptive fuzzy models. Fuzzy Sets and Systems, 2004, 141, 33-46.	1.6	12
46	Eliciting a human understandable model of ice adhesion strength for rotor blade leading edge materials from uncertain experimental data. Expert Systems With Applications, 2012, 39, 10212-10225.	4.4	12
47	Learning human-understandable models for the health assessment of Li-ion batteries via Multi-Objective Genetic Programming. Engineering Applications of Artificial Intelligence, 2019, 86, 1-10.	4.3	11
48	Knowledge Extraction from Fuzzy Data for Estimating Consumer Behavior Models. , 2006, , .		10
49	A Multiobjective Genetic Fuzzy System with Imprecise Probability Fitness for Vague Data. , 2006, , .		10
50	KEEL: A data mining software tool integrating genetic fuzzy systems. , 2008, , .		10
51	Taximeter verification using imprecise data from GPS. Engineering Applications of Artificial Intelligence, 2009, 22, 250-260.	4.3	10
52	Cost-Sensitive Learning of Fuzzy Rules for Imbalanced Classification Problems Using FURIA. International Journal of Uncertainty, Fuzziness and Knowlege-Based Systems, 2014, 22, 643-675.	0.9	10
53	A Model-Based Virtual Sensor for Condition Monitoring of Li-Ion Batteries in Cyber-Physical Vehicle Systems. Journal of Sensors, 2017, 2017, 1-12.	0.6	10
54	Learning Fuzzy Linguistic Models from Low Quality Data by Genetic Algorithms. IEEE International Conference on Fuzzy Systems, 2007, , .	0.0	9

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55	Fuzzy-genetic optimization of the parameters of a low cost system for the optical measurement of several dimensions of vehicles. Soft Computing, 2008, 12, 751-764.	2.1	9
56	A first study on bagging fuzzy rule-based classification systems with multicriteria genetic selection of the component classifiers. , 2008, , .		9
57	Taximeter verification with GPS and soft computing techniques. Soft Computing, 2010, 14, 405-418.	2.1	9
58	Engine Health Monitoring for engine fleets using fuzzy radviz. , 2013, , .		9
59	Leveraging a predictive model of the workload for intelligent slot allocation schemes in energy-efficient HPC clusters. Engineering Applications of Artificial Intelligence, 2016, 48, 95-105.	4.3	9
60	Multi-Objective Evolutionary Design of an Electric Vehicle Chassis. Sensors, 2020, 20, 3633.	2.1	9
61	Evolving Fuzzy Rule Based Classifiers with GA-P: A Grammatical Approach. Lecture Notes in Computer Science, 1999, , 203-210.	1.0	9
62	Equalizing imbalanced imprecise datasets for genetic fuzzy classifiers. International Journal of Computational Intelligence Systems, 2012, 5, 276-296.	1.6	8
63	Bootstrap analysis of multiple repetitions of experiments using an interval-valued multiple comparison procedure. Journal of Computer and System Sciences, 2014, 80, 88-100.	0.9	8
64	Finding informative code metrics under uncertainty for predicting the pass rate of online courses. Information Sciences, 2016, 373, 42-56.	4.0	8
65	Supply Estimation Using Coevolutionary Genetic Algorithms in the Spanish Electrical Market. Applied Intelligence, 2004, 21, 7-24.	3.3	7
66	An evolutionary algorithm for the off-line data driven generation of fuzzy controllers for intelligent buildings. , 0, , .		7
67	Longest path estimation from inherently fuzzy data acquired with GPS using genetic algorithms. , 2006, , .		7
68	Some Results about Mutual Information-based Feature Selection and Fuzzy Discretization of Vague Data. IEEE International Conference on Fuzzy Systems, 2007, , .	0.0	7
69	The behavioral meaning of the median. Information Sciences, 2015, 294, 127-138.	4.0	7
70	Defuzzification of Fuzzy p-Values. Advances in Soft Computing, 2008, , 126-132.	0.4	7
71	On the Use of Bagging, Mutual Information-Based Feature Selection and Multicriteria Genetic Algorithms to Design Fuzzy Rule-Based Classification Ensembles. , 2008, , .		6
72	Inner and outer fuzzy approximations of confidence intervals. Fuzzy Sets and Systems, 2011, 184, 68-83.	1.6	6

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73	Online SOC Estimation of Li-FePO4 Batteries through a New Fuzzy Rule-Based Recursive Filter with Feedback of the Heat Flow Rate. , 2014, , .		6
74	A software tool to efficiently manage the energy consumption of HPC clusters. , 2015, , .		6
75	Local iterative DLT soft-computing vs. interval-valued stereo calibration and triangulation with uncertainty bounding in 3D reconstruction. Neurocomputing, 2015, 167, 44-51.	3.5	6
76	Improving the Eco-Efficiency of High Performance Computing Clusters Using EECluster. Energies, 2016, 9, 197.	1.6	6
77	RKEEL: Using KEEL in R code. , 2016, , .		6
78	Semi-Supervised Recurrent Variational Autoencoder Approach for Visual Diagnosis of Atrial Fibrillation. IEEE Access, 2021, 9, 40227-40239.	2.6	6
79	Preprocessing vague imbalanced datasets and its use in genetic fuzzy classifiers. , 2010, , .		5
80	COMBINING ADABOOST WITH PREPROCESSING ALGORITHMS FOR EXTRACTING FUZZY RULES FROM LOW QUALITY DATA IN POSSIBLY IMBALANCED PROBLEMS. International Journal of Uncertainty, Fuzziness and Knowlege-Based Systems, 2012, 20, 51-71.	0.9	4
81	A framework for learning fuzzy rule-based models with epistemic set-valued data and generalized loss functions. International Journal of Approximate Reasoning, 2018, 92, 321-339.	1.9	4
82	Improving the energy efficiency of virtual data centers in an IT service provider through proactive fuzzy rules-based multicriteria decision making. Journal of Supercomputing, 2019, 75, 1078-1093.	2.4	4
83	A note on â€œSimilarity and dissimilarity measures between fuzzy sets: A formal relational studyâ€•and â€œAdditive similarity and dissimilarity measuresâ€• Fuzzy Sets and Systems, 2020, 390, 183-187.	1.6	4
84	Artificial Intelligence Applied to Evaluate Emissions and Energy Consumption in Commuter Railways: Comparison of Liquefied Natural Gas as an Alternative Fuel to Diesel. Sustainability, 2021, 13, 7112.	1.6	4
85	The Behavioral Meaning of the Median. Advances in Intelligent and Soft Computing, 2010, , 115-122.	0.2	4
86	An Extension of the FURIA Classification Algorithm to Low Quality Data. Lecture Notes in Computer Science, 2013, , 679-688.	1.0	4
87	Obtaining fuzzy rules from interval-censored data with genetic algorithms and a random sets-based semantic of the linguistic labels. Soft Computing, 2011, 15, 1945-1957.	2.1	3
88	Singular spectral analysis of ill-known signals and its application to predictive maintenance of windmills with SCADA records. Soft Computing, 2012, 16, 755-768.	2.1	3
89	A methodology for exploiting the tolerance for imprecision in genetic fuzzy systems and its application to characterization of rotor blade leading edge materials. Mechanical Systems and Signal Processing, 2013, 37, 76-91.	4.4	3
90	Aeroengine prognosis through genetic distal learning applied to uncertain Engine Health Monitoring data. , 2014, , .		3

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91	Comments on â€œLearning from imprecise and fuzzy observations: Data disambiguation through generalized loss minimizationâ€•by Eyke HÃ¼llermeier. International Journal of Approximate Reasoning, 2014, 55, 1583-1587.	1.9	3
92	Assessment of the running resistance of a diesel passenger train using evolutionary bilevel algorithms and operational data. Engineering Applications of Artificial Intelligence, 2021, 105, 104405.	4.3	3
93	A Minimum-Risk Genetic Fuzzy Classifier Based on Low Quality Data. Lecture Notes in Computer Science, 2009, , 654-661.	1.0	3
94	Introducing a genetic fuzzy linguistic combination method for bagging fuzzy rule-based multiclassification systems. , 2010, , .		2
95	Guest editorial: special issue on â€œknowledge extraction from low quality data: theoretical, methodological and practical issuesâ€• Soft Computing, 2012, 16, 739-740.	2.1	2
96	CI-LQD: A software tool for modeling and decision making with Low Quality Data. , 2013, , .		2
97	Supervising classrooms comprising children with dyslexia and other learning problems with graphical exploratory analysis for fuzzy data: Presentation of the software tool and case study. , 2014, , .		2
98	Battery diagnosis for electrical vehicles through semi-physical fuzzy models. , 2016, , .		2
99	Energy-conscious fuzzy rule-based classifiers for battery operated embedded devices. , 2017, , .		2
100	Mining association rules in R using the package RKEEL. , 2017, , .		2
101	The Null Space of Fuzzy Inclusion Measures. IEEE Transactions on Fuzzy Systems, 2021, 29, 641-648.	6.5	2
102	Selecting the Most Informative Inputs in Modelling Problems with Vague Data Applied to the Search of Informative Code Metrics for Continuous Assessment in Computer Science Online Courses. Lecture Notes in Computer Science, 2014, , 299-308.	1.0	2
103	Graphical Analysis of the Progression of Atrial Arrhythmia Using Recurrent Neural Networks. International Journal of Computational Intelligence Systems, 2020, 13, 1567.	1.6	2
104	Fast Charging Protocols based on Pulse-Modulation with Varying Relaxation for Electric Vehicle Li-ion cells. , 2020, , .		2
105	3D motion estimation of bubbles of gas in fluid glass, using an optical flow gradient technique extended to a third dimension. Machine Vision and Applications, 2003, 14, 185-191.	1.7	1
106	Using the Adaboost algorithm for extracting fuzzy rules from low quality data: Some preliminary results. , 2011, , .		1
107	Boosting fuzzy rules with low quality data in multi-class problems: Open problems and challenges. , 2013, , .		1
108	Soft methods for bounding the uncertainty of stereo calibration and triangulation. , 2013, , .		1

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109	A Procedure for Extending Input Selection Algorithms to Low Quality Data in Modelling Problems with Application to the Automatic Grading of Uploaded Assignments. Scientific World Journal, The, 2014, 2014, 1-11.	0.8	1
110	The notion of roughness of a fuzzy set. Fuzzy Sets and Systems, 2014, 249, 114-127.	1.6	1
111	Multicriteria Design of Cost-Conscious Fuzzy Rule-Based Classifiers. International Journal of Uncertainty, Fuzziness and Knowlege-Based Systems, 2017, 25, 141-159.	0.9	1
112	Health Assessment of Automotive Batteries Through Computational Intelligence-Based Soft Sensors: An Empirical Study. Advances in Intelligent Systems and Computing, 2018, , 47-56.	0.5	1
113	Eco-Efficient Resource Management in HPC Clusters through Computer Intelligence Techniques. Energies, 2019, 12, 2129.	1.6	1
114	A Unified View of Different Axiomatic Measures Defined on L-Fuzzy Sets. IEEE Transactions on Fuzzy Systems, 2020, 28, 1878-1886.	6.5	1
115	Distal learning of the incremental capacity curve of a LiFePO4 battery. Logic Journal of the IGPL, 2020, , .	1.3	1
116	Identification of Li-ion battery models through monotonic echo serial networks for coarse data. Logic Journal of the IGPL, 2020, 28, 109-120.	1.3	1
117	Analysis of Studentsâ€™ Online Interactions in the Covid Era from the Perspective ofÂAnomaly Detection. Advances in Intelligent Systems and Computing, 2022, , 305-314.	0.5	1
118	A Minimum Risk Wrapper Algorithm for Genetically Selecting Imprecisely Observed Features, Applied to the Early Diagnosis of Dyslexia. Lecture Notes in Computer Science, 2008, , 608-615.	1.0	1
119	Expected Pair-Wise Comparison of the Outcomes of a Fuzzy Random Variable. Advances in Intelligent and Soft Computing, 2010, , 105-113.	0.2	1
120	Random Sets as Ill-Perceived Random Variables. SpringerBriefs in Applied Sciences and Technology, 2014, , 7-45.	0.2	1
121	Generalized stochastic orderings applied to the study of performance of machine learning algorithms for low quality data. , 0, , .		1
122	Energy-Efficient Sound Environment Classifier for Hearing Aids Based on Multi-objective Simulated Annealing Programming. Advances in Intelligent Systems and Computing, 2015, , 261-270.	0.5	1
123	RUL-RVE: Interpretable assessment of Remaining Useful Life. Software Impacts, 2022, 13, 100321.	0.8	1
124	Using Fuzzy Techniques for Bounding the Tolerance of GPS-Based Speed and Distance Measurements in Taximeter Verification. , 2009, , .		0
125	Obtaining a Linguistically Understandable Random Sets-Based Classifier from Interval-Valued Data with Genetic Algorithms. , 2009, , .		0
126	Managing stochastic algorithms cross-validation variability using an interval valued multiple comparison procedure. , 2011, , .		0

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127	Random Fuzzy Sets as Ill-Perceived Random Variables. SpringerBriefs in Applied Sciences and Technology, 2014, , 47-88.	0.2	0
128	Online SOC estimation of Li-FePO<inf>4</inf> batteries through an observer of the system state with minimal nonspecificity. , 2015, , .		0
129	Genetic Fuzzy Modelling of Li-Ion Batteries Through a Combination of Theta-DEA and Knowledge-Based Preference Ordering. Lecture Notes in Computer Science, 2016, , 310-320.	1.0	0
130	Knowledge extraction about atrial arrhythmias through networks of biologically inspired artificial cardiac cells. , 2018, , .		0
131	Improving EECluster to optimize the carbon footprint and operating costs of HPC clusters. , 2019, , .		0
132	Online Estimation of the State of Health of a Rechargeable Battery Through Distal Learning of a Fuzzy Model. Advances in Intelligent Systems and Computing, 2020, , 68-77.	0.5	0
133	Ex-post correction of pacemaker mode switch episodes in undersensed atrial fibrillation. Computers in Biology and Medicine, 2021, 134, 104480.	3.9	0
134	Remaining Useful Life Estimation Using a Recurrent Variational Autoencoder. Lecture Notes in Computer Science, 2021, , 53-64.	1.0	0
135	Genetic Algorithms for Estimating Longest Path from Inherently Fuzzy Data Acquired with GPS. Lecture Notes in Computer Science, 2006, , 232-240.	1.0	0
136	Multiobjective Evolutionary Search of Difference Equations-based Models for Understanding Chaotic Systems. Mathematical Modelling: Theory and Applications, 2008, , 181-201.	0.2	0
137	GFS-Based Analysis of Vague Databases in High Performance Athletics. Lecture Notes in Computer Science, 2009, , 602-609.	1.0	0
138	Graphical Exploratory Analysis of Educational Knowledge Surveys with Missing and Conflictive Answers Using Evolutionary Techniques. Lecture Notes in Computer Science, 2010, , 45-52.	1.0	0
139	Measurement of Ground-Neutral Currents in Three Phase Transformers Using a Genetically Evolved Shaping Filter. Communications in Computer and Information Science, 2010, , 731-740.	0.4	0
140	Local Iterative DLT for Interval-Valued Stereo Calibration and Triangulation Uncertainty Bounding in 3D Biological Form Reconstruction. Advances in Intelligent Systems and Computing, 2014, , 309-318.	0.5	0
141	Assessment of Multi-Objective Optimization Algorithms for Parametric Identification of a Li-Ion Battery Model. Lecture Notes in Computer Science, 2016, , 250-260.	1.0	0
142	Graphical Exploratory Analysis of Fuzzy Data as a Teaching Tool. Studies in Systems, Decision and Control, 2018, , 565-574.	0.8	0
143	Health Monitoring of Automotive Batteries in Fast-Charging Conditions Through a Fuzzy Model of the Incremental Capacity. Studies in Computational Intelligence, 2020, , 155-164.	0.7	0
144	IS LIQUEFIED NATURAL GAS AN ALTERNATIVE TO NON-ELECTRIFIED RAIL TRACTION?. Dyna (Spain), 2022, 97, 432-436.	0.1	0