

Esperanza Garcia-Gonzalo

List of Publications by Year in descending order

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Version: 2024-02-01

77
papers

2,320
citations

257101

24
h-index

223531

46
g-index

79
all docs

79
docs citations

79
times ranked

2030
citing authors

#	ARTICLE	IF	CITATIONS
1	Support Vector Machines Used to Estimate the Battery State of Charge. IEEE Transactions on Power Electronics, 2013, 28, 5919-5926.	5.4	345
2	Hybrid PSO+SVM-based method for forecasting of the remaining useful life for aircraft engines and evaluation of its reliability. Reliability Engineering and System Safety, 2015, 138, 219-231.	5.1	235
3	PSO: A powerful algorithm to solve geophysical inverse problems. Journal of Applied Geophysics, 2010, 71, 13-25.	0.9	163
4	PM10 concentration forecasting in the metropolitan area of Oviedo (Northern Spain) using models based on SVM, MLP, VARMA and ARIMA: A case study. Science of the Total Environment, 2018, 621, 753-761.	3.9	142
5	Stochastic Stability Analysis of the Linear Continuous and Discrete PSO Models. IEEE Transactions on Evolutionary Computation, 2011, 15, 405-423.	7.5	133
6	The PSO family: deduction, stochastic analysis and comparison. Swarm Intelligence, 2009, 3, 245.	1.3	86
7	Battery State-of-Charge Estimator Using the MARS Technique. IEEE Transactions on Power Electronics, 2013, 28, 3798-3805.	5.4	74
8	Particle swarm optimization applied to solving and appraising the streaming-potential inverse problem. Geophysics, 2010, 75, WA3-WA15.	1.4	64
9	The Generalized PSO: A New Door to PSO Evolution. Journal of Artificial Evolution and Applications, 2008, 2008, 1-15.	1.8	63
10	Forecast of the higher heating value in biomass torrefaction by means of machine learning techniques. Journal of Computational and Applied Mathematics, 2019, 357, 284-301.	1.1	60
11	Theoretical analysis of particle swarm trajectories through a mechanical analogy. International Journal of Computational Intelligence Research, 2008, 4, .	0.3	51
12	A hybrid PSO optimized SVM-based model for predicting a successful growth cycle of the Spirulina platensis from raceway experiments data. Journal of Computational and Applied Mathematics, 2016, 291, 293-303.	1.1	45
13	A comparison of several machine learning techniques for the centerline segregation prediction in continuous cast steel slabs and evaluation of its performance. Journal of Computational and Applied Mathematics, 2018, 330, 877-895.	1.1	44
14	Reservoir characterization and inversion uncertainty via a family of particle swarm optimizers. Geophysics, 2012, 77, M1-M16.	1.4	43
15	Hybrid PSO+SVM-based method for long-term forecasting of turbidity in the NalÃ³n river basin: A case study in Northern Spain. Ecological Engineering, 2014, 73, 192-200.	1.6	39
16	Water eutrophication assessment relied on various machine learning techniques: A case study in the Englishmen Lake (Northern Spain). Ecological Modelling, 2019, 404, 91-102.	1.2	37
17	A Hybrid PCA-CART-MARS-Based Prognostic Approach of the Remaining Useful Life for Aircraft Engines. Sensors, 2015, 15, 7062-7083.	2.1	36
18	Convergence and stochastic stability analysis of particle swarm optimization variants with generic parameter distributions. Applied Mathematics and Computation, 2014, 249, 286-302.	1.4	33

#	ARTICLE	IF	CITATIONS
19	Hard-Rock Stability Analysis for Span Design in Entry-Type Excavations with Learning Classifiers. Materials, 2016, 9, 531.	1.3	32
20	Predictive modelling of the higher heating value in biomass torrefaction for the energy treatment process using machine-learning techniques. Neural Computing and Applications, 2019, 31, 8823-8836.	3.2	32
21	A new predictive model based on the PSO-optimized support vector machine approach for predicting the milling tool wear from milling runs experimental data. International Journal of Advanced Manufacturing Technology, 2016, 86, 769-780.	1.5	30
22	Uncertainty assessment for inverse problems in high dimensional spaces using particle swarm optimization and model reduction techniques. Mathematical and Computer Modelling, 2011, 54, 2889-2899.	2.0	27
23	Prediction of the critical temperature of a superconductor by using the WOA/MARS, Ridge, Lasso and Elastic-net machine learning techniques. Neural Computing and Applications, 2021, 33, 17131-17145.	3.2	27
24	STOCHASTIC STABILITY AND NUMERICAL ANALYSIS OF TWO NOVEL ALGORITHMS OF THE PSO FAMILY: PP-GPSO AND RR-GPSO. International Journal on Artificial Intelligence Tools, 2012, 21, 1240011.	0.7	26
25	A hybrid PSO optimized SVM-based method for predicting of the cyanotoxin content from experimental cyanobacteria concentrations in the Trasona reservoir: A case study in Northern Spain. Applied Mathematics and Computation, 2015, 260, 170-187.	1.4	26
26	A New Predictive Model for the State-of-Charge of a High-Power Lithium-Ion Cell Based on a PSO-Optimized Multivariate Adaptive Regression Spline Approach. IEEE Transactions on Vehicular Technology, 2016, 65, 4197-4208.	3.9	24
27	Air Quality Modeling Using the PSO-SVM-Based Approach, MLP Neural Network, and M5 Model Tree in the Metropolitan Area of Oviedo (Northern Spain). Environmental Modeling and Assessment, 2018, 23, 229-247.	1.2	24
28	A hybrid wavelet kernel SVM-based method using artificial bee colony algorithm for predicting the cyanotoxin content from experimental cyanobacteria concentrations in the Trasona reservoir (Northern Spain). Journal of Computational and Applied Mathematics, 2017, 309, 587-602.	1.1	21
29	A new predictive model for the filtered volume and outlet parameters in micro-irrigation sand filters fed with effluents using the hybrid PSO-SVM-based approach. Computers and Electronics in Agriculture, 2016, 125, 74-80.	3.7	20
30	Particle Swarm Optimization (PSO): a simple and powerful algorithm family for geophysical inversion. , 2008, , .		19
31	Pressure drop modelling in sand filters in micro-irrigation using gradient boosted regression trees. Biosystems Engineering, 2018, 171, 41-51.	1.9	19
32	A hybrid DE optimized wavelet kernel SVR-based technique for algal atypical proliferation forecast in La Barca reservoir: A case study. Journal of Computational and Applied Mathematics, 2020, 366, 112417.	1.1	19
33	Modeling pressure drop produced by different filtering media in microirrigation sand filters using the hybrid ABC-MARS-based approach, MLP neural network and M5 model tree. Computers and Electronics in Agriculture, 2017, 139, 65-74.	3.7	17
34	Estimation of PM10 concentration from air quality data in the vicinity of a major steelworks site in the metropolitan area of AvilÃ©s (Northern Spain) using machine learning techniques. Stochastic Environmental Research and Risk Assessment, 2018, 32, 3287-3298.	1.9	17
35	Prediction of outlet dissolved oxygen in micro-irrigation sand media filters using a Gaussian process regression. Biosystems Engineering, 2020, 195, 198-207.	1.9	16
36	How to design a powerful family of particle swarm optimizers for inverse modelling. Transactions of the Institute of Measurement and Control, 2012, 34, 705-719.	1.1	15

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37	Estimation of water table from self-potential data using particle swarm optimization (PSO). , 2008, , .		13
38	Hybrid PSO-MARS-based model for forecasting a successful growth cycle of the Spirulina platensis from experimental data in open raceway ponds. Ecological Engineering, 2015, 81, 534-542.	1.6	13
39	Using evolutionary multivariate adaptive regression splines approach to evaluate the eutrophication in the Pozón de la Dolores lake (Northern Spain). Ecological Engineering, 2016, 94, 136-151.	1.6	12
40	Cyanotoxin level prediction in a reservoir using gradient boosted regression trees: a case study. Environmental Science and Pollution Research, 2018, 25, 22658-22671.	2.7	12
41	Air quality modeling in the Oviedo urban area (NW Spain) by using multivariate adaptive regression splines. Environmental Science and Pollution Research, 2015, 22, 6642-6659.	2.7	11
42	Evolution and forecasting of PM10 concentration at the Port of Gijón (Spain). Scientific Reports, 2020, 10, 11716.	1.6	11
43	A new hybrid model to foretell thermal power efficiency from energy performance certificates at residential dwellings applying a Gaussian process regression. Neural Computing and Applications, 2021, 33, 6627-6640.	3.2	11
44	Hybrid ABC Optimized MARS-Based Modeling of the Milling Tool Wear from Milling Run Experimental Data. Materials, 2016, 9, 82.	1.3	10
45	Predictive modelling of eutrophication in the Pozón de la Dolores lake (Northern Spain) by using an evolutionary support vector machines approach. Journal of Mathematical Biology, 2018, 76, 817-840.	0.8	10
46	Particle swarm optimisation: time for uniformisation. International Journal of Computing Science and Mathematics, 2013, 4, 16.	0.2	9
47	Modeling of the algal atypical increase in La Barca reservoir using the DE optimized least square support vector machine approach with feature selection. Mathematics and Computers in Simulation, 2019, 166, 461-480.	2.4	9
48	Modeling algal atypical proliferation using the hybrid DE-MARS-based approach and M5 model tree in La Barca reservoir: A case study in northern Spain. Ecological Engineering, 2019, 130, 198-212.	1.6	9
49	A New Predictive Model for Evaluating Chlorophyll-a Concentration in Tanes Reservoir by Using a Gaussian Process Regression. Water Resources Management, 2020, 34, 4921-4941.	1.9	8
50	A New Predictive Model Based on the ABC Optimized Multivariate Adaptive Regression Splines Approach for Predicting the Remaining Useful Life in Aircraft Engines. Energies, 2016, 9, 409.	1.6	7
51	A new predictive model for the outlet turbidity in micro-irrigation sand filters fed with effluents using Gaussian process regression. Computers and Electronics in Agriculture, 2020, 170, 105292.	3.7	7
52	Using Apparent Density of Paper from Hardwood Kraft Pulps to Predict Sheet Properties, based on Unsupervised Classification and Multivariable Regression Techniques. BioResources, 2015, 10, .	0.5	7
53	Predicting Benzene Concentration Using Machine Learning and Time Series Algorithms. Mathematics, 2020, 8, 2205.	1.1	6
54	Particle Swarm Optimization in High Dimensional Spaces. Lecture Notes in Computer Science, 2010, , 496-503.	1.0	6

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55	Predictive model of gas consumption and air emissions of a lime kiln in a kraft process using the ABC/MARS-based technique. <i>International Journal of Advanced Manufacturing Technology</i> , 2019, 100, 1549-1562.	1.5	5
56	Prediction of Five Softwood Paper Properties from its Density using Support Vector Machine Regression Techniques. <i>BioResources</i> , 2015, 11, .	0.5	5
57	A new predictive model for the cyanotoxin content from experimental cyanobacteria concentrations in a reservoir based on the ABC optimized support vector machine approach: A case study in Northern Spain. <i>Ecological Informatics</i> , 2015, 30, 49-59.	2.3	4
58	Detection of outliers in pollutant emissions from the Soto de Ribera coal-fired power plant using functional data analysis: a case study in northern Spain. <i>Environmental Science and Pollution Research</i> , 2020, 27, 8-20.	2.7	4
59	Particle Swarm Optimization: A Powerful Family of Stochastic Optimizers. Analysis, Design and Application to Inverse Modelling. <i>Lecture Notes in Computer Science</i> , 2011, , 1-8.	1.0	4
60	AMTCLAB: A MATLAB®-based program for traveltime analysis and velocity tuning in 2D elliptical anisotropic media. <i>Computers and Geosciences</i> , 2009, 35, 2057-2064.	2.0	3
61	A Hybrid Predictive Approach for Chromium Layer Thickness in the Hard Chromium Plating Process Based on the Differential Evolution/Gradient Boosted Regression Tree Methodology. <i>Mathematics</i> , 2020, 8, 959.	1.1	3
62	Modeling algal atypical proliferation in La Barca reservoir using L-SHADE optimized gradient boosted regression trees: a case study. <i>Neural Computing and Applications</i> , 2021, 33, 7821-7838.	3.2	3
63	PSO Advances and Application to Inverse Problems. <i>Lecture Notes in Computer Science</i> , 2010, , 147-154.	1.0	1
64	Detection of Outliers in Pollutant Emissions from the Soto de Ribera Coal-Fired Plant Using Functional Data Analysis: A Case Study in Northern Spain. <i>Proceedings (mdpi)</i> , 2018, 2, .	0.2	1
65	Sulfatase 2 Is Associated with Steroid Resistance in Childhood Nephrotic Syndrome. <i>Journal of Clinical Medicine</i> , 2021, 10, 523.	1.0	1
66	Aligned PSO for Optimization of Image Processing Methods Applied to the Face Recognition Problem. <i>Lecture Notes in Computer Science</i> , 2013, , 642-651.	1.0	1
67	A Multivariate Approach to Time Series Forecasting of Copper Prices with the Help of Multiple Imputation by Chained Equations and Multivariate Adaptive Regression Splines. <i>Advances in Intelligent Systems and Computing</i> , 2021, , 691-701.	0.5	1
68	Modeling eutrophication risks in Tanes reservoir by using a hybrid WOA optimized SVR-relied technique along with feature selection based on the MARS approximation. <i>Stochastic Environmental Research and Risk Assessment</i> , 0, , 1.	1.9	1
69	PM10 modeling in the Oviedo urban area (Northern Spain) by using multivariate adaptive regression splines. , 2014, , .		0
70	Modeling the milling tool wear by using an evolutionary SVM-based model from milling runs experimental data. <i>AIP Conference Proceedings</i> , 2015, , .	0.3	0
71	Modelling energy performance using a new hybrid DE/MARS-based approach for fossil-fuel thermal power stations. <i>Environmental Science and Pollution Research</i> , 2021, 28, 4417-4429.	2.7	0
72	Time Series Analysis for the COMEX Gold Spot Price Forecasting by Using NARX DE/SVR and DE/GPR Techniques. <i>Advances in Intelligent Systems and Computing</i> , 2022, , 145-154.	0.5	0

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73	Time Series Forecasting of Gold Prices with the Help of Its Decomposition and Multivariate Adaptive Regression Splines. Advances in Intelligent Systems and Computing, 2022, , 135-144.	0.5	0
74	Analysis of kinetic data in industrial steel converter for the operation control. Revue De Metallurgie, 2007, 104, 59-66.	0.3	0
75	TWO ALGORITHMS OF THE EXTENDED PSO FAMILY. , 2010, , .		0
76	Particle Swarm Optimization and Inverse Problems. Advances in Intelligent and Soft Computing, 2010, , 289-296.	0.2	0
77	Time Series Analysis for the COMEX Copper Spot Price by Using Support Vector Regression. Advances in Intelligent Systems and Computing, 2021, , 702-708.	0.5	0