Nhat-Duc Hoang

List of Publications by Year
in descending order

103 papers	4,303 citations	87888 38 h-index	123424 61 g-index
105 all docs	105 docs citations	105 times ranked	3012 citing authors

#	Article	IF	Citations
1	An advanced meta-learner based on artificial electric field algorithm optimized stacking ensemble techniques for enhancing prediction accuracy of soil shear strength. Engineering With Computers, 2022, 38, 2185-2207.	6.1	18
2	Prediction of long-term deflections of reinforced-concrete members using a novel swarm optimized extreme gradient boosting machine. Engineering With Computers, 2022, 38, 1255-1267.	6.1	15
3	A Novel Approach for Detection of Pavement Crack and Sealed Crack Using Image Processing and Salp Swarm Algorithm Optimized Machine Learning. Advances in Civil Engineering, 2022, 2022, 1-21.	0.7	11
4	Prediction of Pile Bearing Capacity Using Opposition-Based Differential Flower Pollination-Optimized Least Squares Support Vector Regression (ODFP-LSSVR). Advances in Civil Engineering, 2022, 2022, 1-25.	0.7	8
5	Computer vision based asphalt pavement segregation detection using image texture analysis integrated with extreme gradient boosting machine and deep convolutional neural networks. Measurement: Journal of the International Measurement Confederation, 2022, 196, 111207.	5.0	7
6	Computer vision-based classification of concrete spall severity using metaheuristic-optimized Extreme Gradient Boosting Machine and Deep Convolutional Neural Network. Automation in Construction, 2022, 140, 104371.	9.8	18
7	A success history-based adaptive differential evolution optimized support vector regression for estimating plastic viscosity of fresh concrete. Engineering With Computers, 2021, 37, 1485-1498.	6.1	15
8	Prediction of gully erosion susceptibility mapping using novel ensemble machine learning algorithms. Geomatics, Natural Hazards and Risk, 2021, 12, 469-498.	4.3	48
9	Predicting Rainfall-Induced Soil Erosion Based on a Hybridization of Adaptive Differential Evolution and Support Vector Machine Classification. Mathematical Problems in Engineering, 2021, 2021, 1-20.	1.1	24
10	A new hybrid equilibrium optimized SysFor based geospatial data mining for tropical storm-induced flash flood susceptible mapping. Journal of Environmental Management, 2021, 280, 111858.	7.8	15
11	Automatic Impervious Surface Area Detection Using Image Texture Analysis and Neural Computing Models with Advanced Optimizers. Computational Intelligence and Neuroscience, 2021, 2021, 1-17.	1.7	9
12	An approach based on socio-politically optimized neural computing network for predicting shallow landslide susceptibility at tropical areas. Environmental Earth Sciences, 2021, 80, 1.	2.7	1
13	Evaluation of Different Machine Learning Models for Predicting Soil Erosion in Tropical Sloping Lands of Northeast Vietnam. Applied and Environmental Soil Science, 2021, 2021, 1-14.	1.7	2
14	Remote Sensingâ€“Based Urban Green Space Detection Using Marine Predators Algorithm Optimized Machine Learning Approach. Mathematical Problems in Engineering, 2021, 2021, 1-22.	1.1	14
15	Image processing-based automatic detection of asphalt pavement rutting using a novel metaheuristic optimized machine learning approach. Soft Computing, 2021, 25, 12839-12855.	3.6	23
16	The use of bioshields for coastal protection in Vietnam: Current status and potential. Regional Studies in Marine Science, 2021, 47, 101945.	0.7	7
17	Automatic recognition of concrete spall using image processing and metaheuristic optimized LogitBoost classification tree. Advances in Engineering Software, 2021, 159, 103031.	3.8	21
18	Computer Vision-Based Patched and Unpatched Pothole Classification Using Machine Learning Approach Optimized by Forensic-Based Investigation Metaheuristic. Complexity, 2021, 2021, 1-17.	1.6	20

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19	An Image-Based Algorithm for the Automatic Detection of Loosened Bolts. , 2021, 2, .		0
20	Concrete Spalling Severity Classification Using Image Texture Analysis and a Novel Jellyfish Search Optimized Machine Learning Approach. Advances in Civil Engineering, 2021, 2021, 1-20.	0.7	6
21	A hybrid computational intelligence approach for predicting soil shear strength for urban housing construction: a case study at Vinhomes Imperia project, Hai Phong city (Vietnam). Engineering With Computers, 2020, 36, 603-616.	6.1	46
22	Predicting ultimate bond strength of corroded reinforcement and surrounding concrete using a metaheuristic optimized least squares support vector regression model. Neural Computing and Applications, 2020, 32, 7289-7309.	5.6	38
23	Advanced soft computing techniques for predicting soil compression coefficient in engineering project: a comparative study. Engineering With Computers, 2020, 36, 1405-1416.	6.1	11
24	A novel deep learning neural network approach for predicting flash flood susceptibility: A case study at a high frequency tropical storm area. Science of the Total Environment, 2020, 701, 134413.	8.0	216
25	Estimating landslide occurrence via small watershed method with relevance vector machine. Earth Science Informatics, 2020, 13, 249-260.	3.2	5
26	A Novel Approach for Automatic Detection of Concrete Surface Voids Using Image Texture Analysis and History-Based Adaptive Differential Evolution Optimized Support Vector Machine. Advances in Civil Engineering, 2020, 2020, 1-15.	0.7	8
27	A New Hybrid Fireflyâ€“PSO Optimized Random Subspace Tree Intelligence for Torrential Rainfall-Induced Flash Flood Susceptible Mapping. Remote Sensing, 2020, 12, 2688.	4.0	46
28	Image Processing-Based Spall Object Detection Using Gabor Filter, Texture Analysis, and Adaptive Moment Estimation (Adam) Optimized Logistic Regression Models. Advances in Civil Engineering, 2020, 2020, 1-16.	0.7	11
29	Machine learning based soil erosion susceptibility prediction using social spider algorithm optimized multivariate adaptive regression spline. Measurement: Journal of the International Measurement Confederation, 2020, 164, 108066.	5.0	25
30	Image Processing-Based Pitting Corrosion Detection Using Metaheuristic Optimized Multilevel Image Thresholding and Machine-Learning Approaches. Mathematical Problems in Engineering, 2020, 2020, 1-19.	1.1	44
31	Prediction of interface yield stress and plastic viscosity of fresh concrete using a hybrid machine learning approach. Advanced Engineering Informatics, 2020, 44, 101057.	8.0	35
32	Effectiveness assessment of Keras based deep learning with different robust optimization algorithms for shallow landslide susceptibility mapping at tropical area. Catena, 2020, 188, 104458.	5.0	96
33	A Novel GIS-Based Random Forest Machine Algorithm for the Spatial Prediction of Shallow Landslide Susceptibility. Forests, 2020, 11, 118.	2.1	54
34	Predicting algal appearance on mortar surface with ensembles of adaptive neuro fuzzy models: a comparative study of ensemble strategies. International Journal of Machine Learning and Cybernetics, 2019, 10, 1687-1704.	3.6	7
35	Automatic Detection of Concrete Spalling Using Piecewise Linear Stochastic Gradient Descent Logistic Regression and Image Texture Analysis. Complexity, 2019, 2019, 1-14.	1.6	33
36	Image Processing-Based Detection of Pipe Corrosion Using Texture Analysis and Metaheuristic-Optimized Machine Learning Approach. Computational Intelligence and Neuroscience, 2019, 2019, 1-13.	1.7	46

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37	Spatial prediction of shallow landslide using Bat algorithm optimized machine learning approach: A case study in Lang Son Province, Vietnam. Advanced Engineering Informatics, 2019, 42, 100978.	8.0	37
38	Estimating punching shear capacity of steel fibre reinforced concrete slabs using sequential piecewise multiple linear regression and artificial neural network. Measurement: Journal of the International Measurement Confederation, 2019, 137, 58-70.	5.0	63
39	Automatic detection of asphalt pavement raveling using image texture based feature extraction and stochastic gradient descent logistic regression. Automation in Construction, 2019, 105, 102843.	9.8	61
40	A new intelligence approach based on GIS-based Multivariate Adaptive Regression Splines and metaheuristic optimization for predicting flash flood susceptible areas at high-frequency tropical typhoon area. Journal of Hydrology, 2019, 575, 314-326.	5.4	76
41	Image processing based automatic recognition of asphalt pavement patch using a metaheuristic optimized machine learning approach. Advanced Engineering Informatics, 2019, 40, 110-120.	8.0	44
42	Spatial pattern analysis and prediction of forest fire using new machine learning approach of Multivariate Adaptive Regression Splines and Differential Flower Pollination optimization: A case study at Lao Cai province (Viet Nam). Journal of Environmental Management, 2019, 237, 476-487.	7.8	87
43	A New Approach of Hybrid Bee Colony Optimized Neural Computing to Estimate the Soil Compression Coefficient for a Housing Construction Project. Applied Sciences (Switzerland), 2019, 9, 4912.	2.5	15
44	A swarm intelligence-based machine learning approach for predicting soil shear strength for road construction: a case study at Trung Luong National Expressway Project (Vietnam). Engineering With Computers, 2019, 35, 955-965.	6.1	53
45	Enhancing the accuracy of rainfall-induced landslide prediction along mountain roads with a GIS-based random forest classifier. Bulletin of Engineering Geology and the Environment, 2019, 78, 2835-2849.	3.5	54
46	A novel method for asphalt pavement crack classification based on image processing and machine learning. Engineering With Computers, 2019, 35, 487-498.	6.1	114
47	Spatial prediction of rainfall-induced shallow landslides using gene expression programming integrated with GIS: a case study in Vietnam. Natural Hazards, 2018, 92, 1871-1887.	3.4	27
48	A Probabilistic Safety Evaluation Framework for Multi-Hazard Assessment in a Bridge using SO-MARS Learning Model. KSCE Journal of Civil Engineering, 2018, 22, 903-915.	1.9	9
49	Predicting earthquake-induced soil liquefaction based on a hybridization of kernel Fisher discriminant analysis and a least squares support vector machine: a multi-dataset study. Bulletin of Engineering Geology and the Environment, 2018, 77, 191-204.	3.5	90
50	Estimating construction duration of diaphragm wall using firefly-tuned least squares support vector machine. Neural Computing and Applications, 2018, 30, 2489-2497.	5.6	17
51	GIS-Based Landslide Spatial Modeling Using Batch-Training Back-propagation Artificial Neural Network: A Study of Model Parameters. , 2018, , 239-254.		2
52	Fast Local Laplacian-Based Steerable and Sobel Filters Integrated with Adaptive Boosting Classification Tree for Automatic Recognition of Asphalt Pavement Cracks. Advances in Civil Engineering, 2018, 2018, 1-17.	0.7	11
53	Classification of Asphalt Pavement Cracks Using Laplacian Pyramid-Based Image Processing and a Hybrid Computational Approach. Computational Intelligence and Neuroscience, 2018, 2018, 1-16.	1.7	8
54	Metaheuristic Optimized Edge Detection for Recognition of Concrete Wall Cracks: A Comparative Study on the Performances of Roberts, Prewitt, Canny, and Sobel Algorithms. Advances in Civil Engineering, 2018, 2018, 1-16.	0.7	35

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55	Image Processing-Based Recognition of Wall Defects Using Machine Learning Approaches and Steerable Filters. Computational Intelligence and Neuroscience, 2018, 2018, 1-18.	1.7	36
56	Prediction of soil compression coefficient for urban housing project using novel integration machine learning approach of swarm intelligence and Multi-layer Perceptron Neural Network. Advanced Engineering Informatics, 2018, 38, 593-604.	8.0	117
57	A Novel Integrated Approach of Relevance Vector Machine Optimized by Imperialist Competitive Algorithm for Spatial Modeling of Shallow Landslides. Remote Sensing, 2018, 10, 1538.	4.0	84
58	A Novel Hybrid Swarm Optimized Multilayer Neural Network for Spatial Prediction of Flash Floods in Tropical Areas Using Sentinel-1 SAR Imagery and Geospatial Data. Sensors, 2018, 18, 3704.	3.8	101
59	GIS-based spatial prediction of tropical forest fire danger using a new hybrid machine learning method. Ecological Informatics, 2018, 48, 104-116.	5.2	63
60	Spatial pattern assessment of tropical forest fire danger at Thuan Chau area (Vietnam) using GIS-based advanced machine learning algorithms: A comparative study. Ecological Informatics, 2018, 46, 74-85.	5.2	91
61	Estimation of scour depth at bridges with complex pier foundations using support vector regression integrated with feature selection. Journal of Civil Structural Health Monitoring, 2018, 8, 431-442.	3.9	14
62	Image Processingâ€“Based Classification of Asphalt Pavement Cracks Using Support Vector Machine Optimized by Artificial Bee Colony. Journal of Computing in Civil Engineering, 2018, 32, .	4.7	89
63	Detection of Surface Crack in Building Structures Using Image Processing Technique with an Improved Otsu Method for Image Thresholding. Advances in Civil Engineering, 2018, 2018, 1-10.	0.7	72
64	Automatic Recognition of Asphalt Pavement Cracks Based on Image Processing and Machine Learning Approaches: A Comparative Study on Classifier Performance. Mathematical Problems in Engineering, 2018, 2018, 1-16.	1.1	39
65	Automatic recognition of asphalt pavement cracks using metaheuristic optimized edge detection algorithms and convolution neural network. Automation in Construction, 2018, 94, 203-213.	9.8	221
66	An Artificial Intelligence Method for Asphalt Pavement Pothole Detection Using Least Squares Support Vector Machine and Neural Network with Steerable Filter-Based Feature Extraction. Advances in Civil Engineering, 2018, 2018, 1-12.	0.7	80
67	Spatial prediction of rainfall-induced landslides for the Lao Cai area (Vietnam) using a hybrid intelligent approach of least squares support vector machines inference model and artificial bee colony optimization. Landslides, 2017, 14, 447-458.	5.4	207
68	A novel fuzzy K-nearest neighbor inference model with differential evolution for spatial prediction of rainfall-induced shallow landslides in a tropical hilly area using GIS. Landslides, 2017, 14, 1-17.	5.4	103
69	Estimation of algal colonization growth on mortar surface using a hybridization of machine learning and metaheuristic optimization. Sadhana - Academy Proceedings in Engineering Sciences, 2017, 42, 929-939.	1.3	11
70	Prediction of chloride diffusion in cement mortar using Multi-Gene Genetic Programming and Multivariate Adaptive Regression Splines. Measurement: Journal of the International Measurement Confederation, 2017, 112, 141-149.	5.0	64
71	A Novel Hybrid Approach Based on Instance Based Learning Classifier and Rotation Forest Ensemble for Spatial Prediction of Rainfall-Induced Shallow Landslides using GIS. Sustainability, 2017, 9, 813.	3.2	30
72	An Investigation on the Dynamic Response of Cable Stayed Bridge with Consideration of Three-Axle Vehicle Braking Effects. Journal of Computational Engineering, 2017, 2017, 1-13.	0.8	2

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73	Modeling Punching Shear Capacity of Fiber-Reinforced Polymer Concrete Slabs: A Comparative Study of Instance-Based and Neural Network Learning. Applied Computational Intelligence and Soft Computing, 2017, 2017, 1-11.	2.3	3
74	A Study on the Dynamic Interaction between Three-Axle Vehicle and Continuous Girder Bridge with Consideration of Braking Effects. Journal of Construction Engineering, 2017, 2017, 1-12.	0.9	12
75	Hybrid Intelligent Model Based on Least Squares Support Vector Regression and Artificial Bee Colony Optimization for Time-Series Modeling and Forecasting Horizontal Displacement of Hydropower Dam. , 2017, , 279-293.		10
76	Slope Stability Evaluation Using Radial Basis Function Neural Network, Least Squares Support Vector Machines, and Extreme Learning Machine. , 2017, , 333-344.		19
77	A Bayesian framework based on a Gaussian mixture model and radial-basis-function Fisher discriminant analysis (BayGmmKdaÂV1.1) for spatial prediction of floods. Geoscientific Model Development, 2017, 10, 3391-3409.	3.6	57
78	Estimating Compressive Strength of High Performance Concrete with Gaussian Process Regression Model. Advances in Civil Engineering, 2016, 2016, 1-8.	0.7	61
79	Estimating Concrete Workability Based on Slump Test with Least Squares Support Vector Regression. Journal of Construction Engineering, 2016, 2016, 1-8.	0.9	19
80	Spatial prediction of rainfall-induced shallow landslides using hybrid integration approach of Least-Squares Support Vector Machines and differential evolution optimization: a case study in Central Vietnam. International Journal of Digital Earth, 2016, 9, 1077-1097.	3.9	117
81	Groutability estimation of grouting processes with cement grouts using Differential Flower Pollination Optimized Support Vector Machine. Applied Soft Computing Journal, 2016, 45, 173-186.	7.2	67
82	A Self-Adaptive Fuzzy Inference Model Based on Least Squares SVM for Estimating Compressive Strength of Rubberized Concrete. International Journal of Information Technology and Decision Making, 2016, 15, 603-619.	3.9	10
83	Predicting Colonization Growth of Algae on Mortar Surface with Artificial Neural Network. Journal of Computing in Civil Engineering, 2016, 30, .	4.7	30
84	Slope Collapse Prediction Using Bayesian Framework with K-Nearest Neighbor Density Estimation: Case Study in Taiwan. Journal of Computing in Civil Engineering, 2016, 30, .	4.7	38
85	A Novel Relevance Vector Machine Classifier with Cuckoo Search Optimization for Spatial Prediction of Landslides. Journal of Computing in Civil Engineering, 2016, 30, .	4.7	50
86	Punching shear capacity estimation of FRP-reinforced concrete slabs using a hybrid machine learning approach. Structure and Infrastructure Engineering, 2016, 12, 1153-1161.	3.7	75
87	Hybrid artificial intelligence approach based on metaheuristic and machine learning for slope stability assessment: A multinational data analysis. Expert Systems With Applications, 2016, 46, 60-68.	7.6	85
88	Predicting Compressive Strength of High-Performance Concrete Using Metaheuristic-Optimized Least Squares Support Vector Regression. Journal of Computing in Civil Engineering, 2016, 30, .	4.7	80
89	Optimizing Construction Project Labor Utilization Using Differential Evolution: A Comparative Study of Mutation Strategies. Advances in Civil Engineering, 2015, 2015, 1-8.	0.7	5
90	Typhoon-induced slope collapse assessment using a novel bee colony optimized support vector classifier. Natural Hazards, 2015, 78, 1961-1978.	3.4	33

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91	A Swarm-Optimized Fuzzy Instance-based Learning approach for predicting slope collapses in mountain roads. Knowledge-Based Systems, 2015, 76, 256-263.	7.1	30
92	A Novel Time Series Prediction Approach Based on a Hybridization of Least Squares Support Vector Regression and Swarm Intelligence. Applied Computational Intelligence and Soft Computing, 2014, 2014, 1-8.	2.3	14
93	NIDE: A Novel Improved Differential Evolution for Construction Project Crashing Optimization. Journal of Construction Engineering, 2014, 2014, 1-7.	0.9	5
94	A Novel Resource-Leveling Approach for Construction Project Based on Differential Evolution. Journal of Construction Engineering, 2014, 2014, 1-7.	0.9	9
95	GROUTABILITY PREDICTION OF MICROFINE CEMENT BASED SOIL IMPROVEMENT USING EVOLUTIONARY LS-SVM INFERENCE MODEL. Journal of Civil Engineering and Management, 2014, 20, 839-848.	3.5	20
96	Groutability Estimation of Grouting Processes with Microfine Cements Using an Evolutionary Instance-Based Learning Approach. Journal of Computing in Civil Engineering, 2014, 28, 04014014.	4.7	21
97	Risk Score Inference for Bridge Maintenance Project Using Evolutionary Fuzzy Least Squares Support Vector Machine. Journal of Computing in Civil Engineering, 2014, 28, .	4.7	32
98	INTERVAL ESTIMATION OF CONSTRUCTION COST AT COMPLETION USING LEAST SQUARES SUPPORT VECTOR MACHINE. Journal of Civil Engineering and Management, 2014, 20, 223-236.	3.5	34
99	A novel hybrid intelligent approach for contractor default status prediction. Knowledge-Based Systems, 2014, 71, 314-321.	7.1	23
100	A novel groutability estimation model for ground improvement projects in sandy silt soil based on Bayesian framework. Tunnelling and Underground Space Technology, 2014, 43, 453-458.	6.2	14
101	An Artificial Intelligence Approach for Groutability Estimation Based on Autotuning Support Vector Machine. Journal of Construction Engineering, 2014, 2014, 1-9.	0.9	8
102	Hybrid intelligence approach based on LS-SVM and Differential Evolution for construction cost index estimation: A Taiwan case study. Automation in Construction, 2013, 35, 306-313.	9.8	55
103	A novel time-depended evolutionary fuzzy SVM inference model for estimating construction project at completion. Engineering Applications of Artificial Intelligence, 2012, 25, 744-752.	8.1	32