

Fouzi Harrou

List of Publications by Year in descending order

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Version: 2024-02-01

141
papers

3,866
citations

94269

37
h-index

143772

57
g-index

144
all docs

144
docs citations

144
times ranked

2770
citing authors

#	ARTICLE	IF	CITATIONS
1	Deep learning methods for forecasting COVID-19 time-Series data: A Comparative study. Chaos, Solitons and Fractals, 2020, 140, 110121.	2.5	321
2	Statistical fault detection in photovoltaic systems. Solar Energy, 2017, 150, 485-499.	2.9	205
3	Reliable fault detection and diagnosis of photovoltaic systems based on statistical monitoring approaches. Renewable Energy, 2018, 116, 22-37.	4.3	151
4	Early Detection of Parkinson's Disease Using Deep Learning and Machine Learning. IEEE Access, 2020, 8, 147635-147646.	2.6	123
5	Time Series Modelling and Forecasting of Emergency Department Overcrowding. Journal of Medical Systems, 2014, 38, 107.	2.2	104
6	Comparative study of machine learning methods for COVID-19 transmission forecasting. Journal of Biomedical Informatics, 2021, 118, 103791.	2.5	97
7	An unsupervised monitoring procedure for detecting anomalies in photovoltaic systems using a one-class Support Vector Machine. Solar Energy, 2019, 179, 48-58.	2.9	95
8	Statistical fault detection using PCA-based GLR hypothesis testing. Journal of Loss Prevention in the Process Industries, 2013, 26, 129-139.	1.7	90
9	Vision-based fall detection system for improving safety of elderly people. IEEE Instrumentation and Measurement Magazine, 2017, 20, 49-55.	1.2	87
10	Improved k-NN-Based Monitoring Schemes for Detecting Faults in PV Systems. IEEE Journal of Photovoltaics, 2019, 9, 811-821.	1.5	82
11	Reliable solar irradiance prediction using ensemble learning-based models: A comparative study. Energy Conversion and Management, 2020, 208, 112582.	4.4	77
12	Improved principal component analysis for anomaly detection: Application to an emergency department. Computers and Industrial Engineering, 2015, 88, 63-77.	3.4	74
13	PLS-based EWMA fault detection strategy for process monitoring. Journal of Loss Prevention in the Process Industries, 2015, 36, 108-119.	1.7	72
14	Seasonal ARMA-based SPC charts for anomaly detection: Application to emergency department systems. Neurocomputing, 2016, 173, 2102-2114.	3.5	71
15	Obstacle Detection for Intelligent Transportation Systems Using Deep Stacked Autoencoder and k -Nearest Neighbor Scheme. IEEE Sensors Journal, 2018, 18, 5122-5132.	2.4	69
16	An Integrated Vision-Based Approach for Efficient Human Fall Detection in a Home Environment. IEEE Access, 2019, 7, 114966-114974.	2.6	66
17	Short-Term Forecasting of Photovoltaic Solar Power Production Using Variational Auto-Encoder Driven Deep Learning Approach. Applied Sciences (Switzerland), 2020, 10, 8400.	1.3	66
18	Unsupervised obstacle detection in driving environments using deep-learning-based stereovision. Robotics and Autonomous Systems, 2018, 100, 287-301.	3.0	65

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19	Vision-Based Human Action Classification Using Adaptive Boosting Algorithm. IEEE Sensors Journal, 2018, 18, 5115-5121.	2.4	62
20	Forecasting of Wastewater Treatment Plant Key Features Using Deep Learning-Based Models: A Case Study. IEEE Access, 2020, 8, 184475-184485.	2.6	60
21	Robust and flexible strategy for fault detection in grid-connected photovoltaic systems. Energy Conversion and Management, 2019, 180, 1153-1166.	4.4	58
22	Statistical monitoring of a wastewater treatment plant: A case study. Journal of Environmental Management, 2018, 223, 807-814.	3.8	54
23	Wind Power Prediction Using Ensemble Learning-Based Models. IEEE Access, 2020, 8, 61517-61527.	2.6	54
24	Efficient Wind Power Prediction Using Machine Learning Methods: A Comparative Study. Energies, 2022, 15, 2327.	1.6	50
25	Improved data-based fault detection strategy and application to distillation columns. Chemical Engineering Research and Design, 2017, 107, 22-34.	2.7	48
26	Deep learning approach for sustainable WWTP operation: A case study on data-driven influent conditions monitoring. Sustainable Cities and Society, 2019, 50, 101670.	5.1	48
27	Traffic congestion monitoring using an improved kNN strategy. Measurement: Journal of the International Measurement Confederation, 2020, 156, 107534.	2.5	45
28	Anomaly detection/detectability for a linear model with a bounded nuisance parameter. Annual Reviews in Control, 2014, 38, 32-44.	4.4	44
29	Monitoring Influent Measurements at Water Resource Recovery Facility Using Data-Driven Soft Sensor Approach. IEEE Sensors Journal, 2019, 19, 342-352.	2.4	44
30	Integrated Multiple Directed Attention-Based Deep Learning for Improved Air Pollution Forecasting. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-15.	2.4	44
31	Detecting Abnormal Ozone Measurements With a Deep Learning-Based Strategy. IEEE Sensors Journal, 2018, 18, 7222-7232.	2.4	43
32	Wind power prediction using bootstrap aggregating trees approach to enabling sustainable wind power integration in a smart grid. Energy Conversion and Management, 2019, 201, 112077.	4.4	43
33	An Improved Multivariate Chart Using Partial Least Squares With Continuous Ranked Probability Score. IEEE Sensors Journal, 2018, 18, 6715-6726.	2.4	42
34	Forecasting of Photovoltaic Solar Power Production Using LSTM Approach. , 0, , .		41
35	A proficient approach to forecast COVID-19 spread via optimized dynamic machine learning models. Scientific Reports, 2022, 12, 2467.	1.6	41
36	Ozone measurements monitoring using data-based approach. Chemical Engineering Research and Design, 2016, 100, 220-231.	2.7	40

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37	Monitoring linear antenna arrays using an exponentially weighted moving average-based fault detection scheme. <i>Systems Science and Control Engineering</i> , 2014, 2, 433-443.	1.8	39
38	Monitoring road traffic congestion using a macroscopic traffic model and a statistical monitoring scheme. <i>Sustainable Cities and Society</i> , 2017, 35, 494-510.	5.1	38
39	Kullback-Leibler distance-based enhanced detection of incipient anomalies. <i>Journal of Loss Prevention in the Process Industries</i> , 2016, 44, 73-87.	1.7	37
40	Monitoring a robot swarm using a data-driven fault detection approach. <i>Robotics and Autonomous Systems</i> , 2017, 97, 193-203.	3.0	37
41	Monitoring of Photovoltaic Systems Using Improved Kernel-Based Learning Schemes. <i>IEEE Journal of Photovoltaics</i> , 2021, 11, 806-818.	1.5	37
42	A Machine Learning-Based Approach for Land Cover Change Detection Using Remote Sensing and Radiometric Measurements. <i>IEEE Sensors Journal</i> , 2019, 19, 5843-5850.	2.4	34
43	A Data-Driven Soft Sensor to Forecast Energy Consumption in Wastewater Treatment Plants: A Case Study. <i>IEEE Sensors Journal</i> , 2021, 21, 4908-4917.	2.4	34
44	Forecasting emergency department overcrowding: A deep learning framework. <i>Chaos, Solitons and Fractals</i> , 2020, 139, 110247.	2.5	32
45	Amalgamation of anomaly-detection indices for enhanced process monitoring. <i>Journal of Loss Prevention in the Process Industries</i> , 2016, 40, 365-377.	1.7	31
46	Self-organization in aggregating robot swarms: A DW-KNN topological approach. <i>BioSystems</i> , 2018, 165, 106-121.	0.9	31
47	Multivariate statistical monitoring of photovoltaic plant operation. <i>Energy Conversion and Management</i> , 2020, 205, 112317.	4.4	28
48	Monitoring Influent Conditions of Wastewater Treatment Plants by Nonlinear Data-Based Techniques. <i>IEEE Access</i> , 2019, 7, 108827-108837.	2.6	27
49	A stacked deep learning approach to cyber-attacks detection in industrial systems: application to power system and gas pipeline systems. <i>Cluster Computing</i> , 2022, 25, 561-578.	3.5	27
50	Fall detection using supervised machine learning algorithms: A comparative study. , 2016, , .		26
51	Accelerometer and Camera-Based Strategy for Improved Human Fall Detection. <i>Journal of Medical Systems</i> , 2016, 40, 284.	2.2	24
52	Improved nonlinear fault detection strategy based on the Hellinger distance metric: Plug flow reactor monitoring. <i>Energy and Buildings</i> , 2017, 143, 149-161.	3.1	24
53	Road traffic density estimation and congestion detection with a hybrid observer-based strategy. <i>Sustainable Cities and Society</i> , 2019, 46, 101411.	5.1	24
54	Cyber-attacks detection in industrial systems using artificial intelligence-driven methods. <i>International Journal of Critical Infrastructure Protection</i> , 2022, 38, 100542.	2.9	23

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55	Integrating Model-Based Observer and Kullback-Leibler Metric for Estimating and Detecting Road Traffic Congestion. IEEE Sensors Journal, 2018, 18, 8605-8616.	2.4	22
56	Desertification Detection Using an Improved Variational Autoencoder-Based Approach Through ETM-Landsat Satellite Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 202-213.	2.3	22
57	Malicious attacks detection in crowded areas using deep learning-based approach. IEEE Instrumentation and Measurement Magazine, 2020, 23, 57-62.	1.2	20
58	Deep Generative Learning-Based 1-SVM Detectors for Unsupervised COVID-19 Infection Detection Using Blood Tests. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-11.	2.4	20
59	Improved detection of incipient anomalies via multivariate memory monitoring charts: Application to an air flow heating system. Applied Thermal Engineering, 2016, 109, 65-74.	3.0	19
60	A simple and effective detection strategy using double exponential scheme for photovoltaic systems monitoring. Solar Energy, 2021, 214, 337-354.	2.9	19
61	Statistical detection of abnormal ozone measurements based on Constrained Generalized Likelihood Ratio test. , 2013, , .		17
62	Detection of smurf flooding attacks using Kullback-Leibler-based scheme. , 2018, , .		16
63	Monitoring Distillation Column Systems Using Improved Nonlinear Partial Least Squares-Based Strategies. IEEE Sensors Journal, 2019, 19, 11697-11705.	2.4	16
64	Detecting network cyber-attacks using an integrated statistical approach. Cluster Computing, 2021, 24, 1435-1453.	3.5	16
65	A statistical-based approach for fault detection and diagnosis in a photovoltaic system. , 2017, , .		15
66	Flexible and Efficient Topological Approaches for a Reliable Robots Swarm Aggregation. IEEE Access, 2019, 7, 96372-96383.	2.6	15
67	Copula-based monitoring schemes for non-Gaussian multivariate processes. Journal of Quality Technology, 2020, 52, 219-234.	1.8	14
68	Towards accurate prediction of patient length of stay at emergency department: a GAN-driven deep learning framework. Journal of Ambient Intelligence and Humanized Computing, 2023, 14, 11481-11495.	3.3	14
69	DDOS-attacks detection using an efficient measurement-based statistical mechanism. Engineering Science and Technology, an International Journal, 2020, 23, 870-878.	2.0	13
70	Detecting SYN flood attacks via statistical monitoring charts: A comparative study. , 2017, , .		12
71	A Data-Driven Soft Sensor for Swarm Motion Speed Prediction Using Ensemble Learning Methods. IEEE Sensors Journal, 2021, 21, 19025-19037.	2.4	12
72	Statistical Monitoring of Changes to Land Cover. IEEE Geoscience and Remote Sensing Letters, 2018, 15, 927-931.	1.4	10

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73	Early detection of abnormal patient arrivals at hospital emergency department. , 2015, , .		9
74	A data-based technique for monitoring of wound rotor induction machines: A simulation study. Engineering Science and Technology, an International Journal, 2016, 19, 1424-1435.	2.0	9
75	Detecting abnormal ozone levels using PCA-based GLR hypothesis testing. , 2013, , .		8
76	Enhanced monitoring using PCA-based GLR fault detection and multiscale filtering. , 2013, , .		8
77	Improved anomaly detection using multi-scale PLS and generalized likelihood ratio test. , 2016, , .		8
78	Traffic congestion detection based on hybrid observer and GLR test. , 2018, , .		8
79	Monitoring Robotic Swarm Systems Under Noisy Conditions Using an Effective Fault Detection Strategy. IEEE Sensors Journal, 2019, 19, 1141-1152.	2.4	8
80	Building Roof Superstructures Classification From Imbalanced and Low Density Airborne LiDAR Point Cloud. IEEE Sensors Journal, 2021, 21, 14960-14976.	2.4	8
81	Monitoring patient flow in a hospital emergency department: ARMA-based nonparametric GLRT scheme. Health Informatics Journal, 2021, 27, 146045822110216.	1.1	8
82	Univariate process monitoring using multiscale Shewhart charts. , 2014, , .		7
83	A simple strategy for fall events detection. , 2016, , .		7
84	A Method to Detect DOS and DDOS Attacks based on Generalized Likelihood Ratio Test. , 2018, , .		7
85	An Efficient Statistical Strategy to Monitor a Robot Swarm. IEEE Sensors Journal, 2020, 20, 2214-2223.	2.4	7
86	Improving robots swarm aggregation performance through the Minkowski distance function. , 2020, , .		7
87	Unsupervised deep learning-based process monitoring methods. , 2021, , 193-223.		6
88	Effective forecasting of key features in hospital emergency department: Hybrid deep learning-driven methods. Machine Learning With Applications, 2022, 7, 100200.	3.0	6
89	Forecasting of Bicycle and Pedestrian Traffic Using Flexible and Efficient Hybrid Deep Learning Approach. Applied Sciences (Switzerland), 2022, 12, 4482.	1.3	6
90	Statistical monitoring of linear antenna arrays. Engineering Science and Technology, an International Journal, 2016, 19, 1781-1787.	2.0	5

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91	A Data-Driven Monitoring Technique for Enhanced Fall Events Detection. IFAC-PapersOnLine, 2016, 49, 333-338.	0.5	5
92	Online model-based fault detection for grid connected PV systems monitoring. , 2017, , .		5
93	A multivariate time series approach to forecasting daily attendances at hospital emergency department. , 2017, , .		5
94	Detecting cyber-attacks using a CRPS-based monitoring approach. , 2018, , .		5
95	Wastewater treatment plant monitoring via a deep learning approach. , 2018, , .		5
96	Reliable detection of abnormal ozone measurements using an air quality sensors network. , 2018, , .		5
97	Unsupervised recurrent deep learning scheme for process monitoring. , 2021, , 225-253.		5
98	An Effective Wind Power Prediction using Latent Regression Models. , 2021, , .		5
99	Optimized Gaussian Process Regression by Bayesian Optimization to Forecast COVID-19 Spread in India and Brazil: A Comparative Study. , 2021, , .		5
100	Machine learning and deep learning-driven methods for predicting ambient particulate matters levels: A case study. Concurrency Computation Practice and Experience, 2022, 34, .	1.4	5
101	A distance weighted-based approach for self-organized aggregation in robot swarms. , 2017, , .		4
102	Linear latent variable regression (LVR)-based process monitoring. , 2021, , 19-70.		4
103	Toward Emerging Cubic-Spline Patterns With a Mobile Robotics Swarm System. IEEE Transactions on Cognitive and Developmental Systems, 2022, 14, 565-577.	2.6	4
104	A measurement-based fault detection approach applied to monitor robots swarm. , 2017, , .		3
105	Enhanced dynamic data-driven fault detection approach: Application to a two-tank heater system. , 2017, , .		3
106	An Improved Wavelet-Based Multivariable Fault Detection Scheme. , 2017, , .		3
107	Monitoring land-cover changes by combining a detection step with a classification step. , 2018, , .		3
108	A robust monitoring technique for fault detection in grid-connected PV plants. , 2018, , .		3

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109	Efficient land desertification detection using a deep learning-driven generative adversarial network approach: A case study. <i>Concurrency Computation Practice and Experience</i> , 2022, 34, e6604.	1.4	3
110	Automatic Human Fall Detection Using Multiple Tri-axial Accelerometers. , 2021, , .		3
111	Anomaly detection with bounded nuisance parameters and safe train navigation. , 2008, , .		2
112	GLRT Based Anomaly Detection for Sensor Network Monitoring. , 2015, , .		2
113	Enhanced monitoring of abnormal emergency department demands. , 2015, , .		2
114	PLS-based memory control scheme for enhanced process monitoring. , 2016, , .		2
115	Statistical control chart and neural network classification for improving human fall detection. , 2016, , .		2
116	An efficient statistical-based approach for road traffic congestion monitoring. , 2017, , .		2
117	Model-based fault detection algorithm for photovoltaic system monitoring. , 2017, , .		2
118	Efficient Deep Learning-driven Approach for PM2.5 Forecasting at Different Locations in Spain. , 2021, , .		2
119	Predicting road traffic density using a machine learning-driven approach. , 2021, , .		2
120	Nonlinear partial least squares with Hellinger distance for nonlinear process monitoring. , 2016, , .		1
121	Adaboost-based algorithm for human action recognition. , 2017, , .		1
122	An Effective Network Intrusion Detection Using Hellinger Distance-Based Monitoring Mechanism. , 2018, , .		1
123	Statistical detection of faults in swarm robots under noisy conditions. , 2018, , .		1
124	Fault isolation. , 2021, , 71-117.		1
125	Multiscale latent variable regression-based process monitoring methods. , 2021, , 155-191.		1
126	A deep attention-driven model to forecast solar irradiance. , 2021, , .		1

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127	Nonparametric Kullback-Leibler distance-based method for networks intrusion detection. , 2020, , .		1
128	Traffic congestion detection: data-based techniques. , 2022, , 141-195.		1
129	Forecasting FSW Materialâ€™s Behavior using an Artificial Intelligence-Driven Approach. , 2022, , .		1
130	A measurement-based technique for incipient anomaly detection. , 2015, , .		0
131	Fault detection in processes represented by PLS models using an EWMA control scheme. , 2016, , .		0
132	Flexible and efficient model-based congestion detection approach. , 2018, , .		0
133	Nonlinear latent variable regression methods. , 2021, , 119-154.		0
134	Conclusion and further research directions. , 2021, , 305-309.		0
135	Detecting Cyber-Attacks in Modern Power Systems Using an Unsupervised Monitoring Technique. , 2021, , .		0
136	Predicting COVID-19 Spread using Simple Time-Series Statistical Models. , 2021, , .		0
137	Fault Detection in Solar PV Systems Using Hypothesis Testing. , 2021, , .		0
138	Road traffic density estimation. , 2022, , 65-98.		0
139	Model-based techniques for traffic congestion detection. , 2022, , 99-139.		0
140	Conclusion and further research directions. , 2022, , 247-254.		0
141	Recurrent and convolutional neural networks for traffic management. , 2022, , 197-246.		0