

Helon Vicente Hultmann Ayala

List of Publications by Year in descending order

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54
papers

978
citations

623699

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h-index

454934

30
g-index

54
all docs

54
docs citations

54
times ranked

1114
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Tuning of PID controller based on a multiobjective genetic algorithm applied to a robotic manipulator. <i>Expert Systems With Applications</i> , 2012, 39, 8968-8974. | 7.6 | 182 |
| 2 | Image thresholding segmentation based on a novel beta differential evolution approach. <i>Expert Systems With Applications</i> , 2015, 42, 2136-2142. | 7.6 | 89 |
| 3 | Capacitor placement of distribution systems using particle swarm optimization approaches. <i>International Journal of Electrical Power and Energy Systems</i> , 2015, 64, 839-851. | 5.5 | 88 |
| 4 | An improved free search differential evolution algorithm: A case study on parameters identification of one diode equivalent circuit of a solar cell module. <i>Energy</i> , 2015, 93, 1515-1522. | 8.8 | 64 |
| 5 | A self-adaptive chaotic differential evolution algorithm using gamma distribution for unconstrained global optimization. <i>Applied Mathematics and Computation</i> , 2014, 234, 452-459. | 2.2 | 59 |
| 6 | Wind turbine blade geometry design based on multi-objective optimization using metaheuristics. <i>Energy</i> , 2018, 162, 645-658. | 8.8 | 59 |
| 7 | Design of heat exchangers using a novel multiobjective free search differential evolution paradigm. <i>Applied Thermal Engineering</i> , 2016, 94, 170-177. | 6.0 | 54 |
| 8 | Cascaded evolutionary algorithm for nonlinear system identification based on correlation functions and radial basis functions neural networks. <i>Mechanical Systems and Signal Processing</i> , 2016, 68-69, 378-393. | 8.0 | 40 |
| 9 | A Multiobjective Gaussian Particle Swarm Approach Applied to Electromagnetic Optimization. <i>IEEE Transactions on Magnetics</i> , 2010, 46, 3289-3292. | 2.1 | 38 |
| 10 | Nonlinear black-box system identification through coevolutionary algorithms and radial basis function artificial neural networks. <i>Applied Soft Computing Journal</i> , 2020, 87, 105990. | 7.2 | 28 |
| 11 | Bio-inspired optimization algorithms for real underwater image restoration. <i>Signal Processing: Image Communication</i> , 2019, 77, 49-65. | 3.2 | 27 |
| 12 | Multiobjective Krill Herd Algorithm for Electromagnetic Optimization. <i>IEEE Transactions on Magnetics</i> , 2016, 52, 1-4. | 2.1 | 25 |
| 13 | Wind turbines anomaly detection based on power curves and ensemble learning. <i>IET Renewable Power Generation</i> , 2020, 14, 4086-4093. | 3.1 | 25 |
| 14 | Population's variance-based Adaptive Differential Evolution for real parameter optimization. , 2013, , . | | 21 |
| 15 | Multiobjective Symbiotic Search Algorithm Approaches for Electromagnetic Optimization. <i>IEEE Transactions on Magnetics</i> , 2017, 53, 1-4. | 2.1 | 14 |
| 16 | Harmony Search Approach Based on Ricker Map for Multi-Objective Transformer Design Optimization. <i>IEEE Transactions on Magnetics</i> , 2015, 51, 1-4. | 2.1 | 13 |
| 17 | Nonlinear Black-box System Identification through Neural Networks of a Hysteretic Piezoelectric Robotic Micromanipulator. <i>IFAC-PapersOnLine</i> , 2015, 48, 409-414. | 0.9 | 13 |
| 18 | Efficient hardware implementation of radial basis function neural network with customized-precision floating-point operations. <i>Control Engineering Practice</i> , 2017, 60, 124-132. | 5.5 | 11 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | Nonlinear model predictive control hardware implementation with custom-precision floating point operations. , 2016, , . | | 10 |
| 20 | Machine Learning-Based Corrosion-Like Defect Estimation With Shear-Horizontal Guided Waves Improved by Mode Separation. IEEE Access, 2021, 9, 40836-40849. | 4.2 | 10 |
| 21 | Short-term load forecasting using wavenet ensemble approaches. , 2016, , . | | 9 |
| 22 | Multiobjective Cuckoo Search Applied to Radial Basis Function Neural Networks Training for System Identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 2539-2544. | 0.4 | 7 |
| 23 | Multi-objective differential evolution algorithm for underwater image restoration. , 2015, , . | | 7 |
| 24 | Nonlinear System Identification Using Neural Network. Communications in Computer and Information Science, 2012, , 122-131. | 0.5 | 7 |
| 25 | An R library for nonlinear black-box system identification. SoftwareX, 2020, 11, 100495. | 2.6 | 6 |
| 26 | Improved feature extraction of guided wave signals for defect detection in welded thermoplastic composite joints. Measurement: Journal of the International Measurement Confederation, 2022, 198, 111372. | 5.0 | 6 |
| 27 | Multiobjective wind driven optimization approach applied to transformer design. , 2016, , . | | 5 |
| 28 | Modelling and Predicting Backstroke Start Performance Using Non-Linear And Linear Models. Journal of Human Kinetics, 2018, 61, 29-38. | 1.5 | 5 |
| 29 | Recent Meta-Heuristics Improved by Self-Adaptation Applied to Nonlinear Model-Based Predictive Control. IEEE Access, 2020, 8, 118841-118852. | 4.2 | 5 |
| 30 | Improved multiobjective particle swarm optimization for designing PID controllers applied to robotic manipulator. , 2014, , . | | 4 |
| 31 | Modeling of a 2-DOF Piezoelectric Micromanipulator at High Frequency Rates through Nonlinear Black-box System Identification. , 2018, , . | | 4 |
| 32 | Feature engineering to cope with noisy data in sparse identification. Expert Systems With Applications, 2022, 188, 115995. | 7.6 | 4 |
| 33 | Multivariable nonlinear boiler power plant identification through neural networks and Particle Swarm Optimization approaches. , 2010, , . | | 3 |
| 34 | Mode-observability conditions for linear and nonlinear systems. , 2012, , . | | 3 |
| 35 | Cascaded free search differential evolution applied to nonlinear system identification based on correlation functions and neural networks. , 2014, , . | | 3 |
| 36 | Variable structure control optimized by differential evolution approach applied to continuous stirred tank reactor. Chemical Engineering Research and Design, 2015, 100, 248-260. | 5.6 | 3 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | A SVM optimization tool and FPGA system architecture applied to NMPC. , 2017, , . | | 3 |
| 38 | Predicting centre of mass horizontal speed in low to severe swimming intensities with linear and non-linear models. Journal of Sports Sciences, 2019, 37, 1512-1520. | 2.0 | 3 |
| 39 | Piezoelectric micromanipulator dataset for hysteresis identification. Data in Brief, 2020, 29, 105175. | 1.0 | 3 |
| 40 | Multiobjective Gaussian Particle Swarm Approach Applied to Multi-loop PI Controller Tuning of a Quadruple-Tank System. Studies in Computational Intelligence, 2010, , 1-16. | 0.9 | 3 |
| 41 | Modeling and predicting the backstroke to breaststroke turns performance in age-group swimmers. Sports Biomechanics, 2023, 22, 1700-1721. | 1.6 | 3 |
| 42 | Multi-objective symbiotic search algorithm approaches for electromagnetic optimization. , 2016, , . | | 2 |
| 43 | Heuristic Kalman Algorithm for Multiobjective Optimization. * *This work has been partially supported by the National Council of Scientific and Technological Development of Brazil (CNPq) through the grants 303908/2015-7-PQ, 304066/2016-8-PQ and BJT-304804/2014-2. IFAC-PapersOnLine, 2017, 50, 4460-4465. | 0.9 | 2 |
| 44 | Dynamic Multi-criteria Classifier Selection for Illegal Tapping Detection in Oil Pipelines. , 2020, , . | | 2 |
| 45 | Deep Learning Applied to Data-driven Dynamic Characterization of Hysteretic Piezoelectric Micromanipulators. IFAC-PapersOnLine, 2020, 53, 8559-8564. | 0.9 | 2 |
| 46 | Electrical Transmission Lines Design through Integer Multiobjective Particle Swarm Optimization Approach. , 2012, , . | | 1 |
| 47 | Bat-inspired optimization approach applied to jiles-atherton hysteresis parameters tuning. , 2014, , . | | 1 |
| 48 | Improved Stress Estimation with Machine Learning and Ultrasonic Guided Waves. Experimental Mechanics, 2022, 62, 237-251. | 2.0 | 1 |
| 49 | Data-Driven Pilot Behavior Modeling Applied to an Aircraft Offset Landing Task. Advances in Intelligent Systems and Computing, 2018, , 117-127. | 0.6 | 1 |
| 50 | On the Improvement of Elite Swimmers Velocity Identification by Using Neural Network Associated to Multiobjective Optimization. , 2014, , . | | 0 |
| 51 | Cascaded evolutionary multiobjective identification based on correlation function statistical tests for improving velocity analyzes in swimming. , 2014, , . | | 0 |
| 52 | Efficient Hardware Implementation of Nonlinear Moving-horizon State Estimation with Artificial Neural Networks. IFAC-PapersOnLine, 2020, 53, 7813-7818. | 0.9 | 0 |
| 53 | Evaluation of Nonlinear System Identification to Model Piezoacoustic Transmission. IFAC-PapersOnLine, 2020, 53, 8802-8807. | 0.9 | 0 |
| 54 | Improved Image-Based Welding Status Recognition with Dimensionality Reduction and Shallow Learning. Experimental Mechanics, 0, , 1. | 2.0 | 0 |