RubÃ©n Morales Menendez

List of Publications by Year
in descending order

153 papers	3,127 citations	236925 25 h-index	197818 49 g-index
163 all docs	163 docs citations	163 times ranked	2665 citing authors

#	Article	IF	Citations
1	Process intensification 4.0: A new approach for attaining new, sustainable and circular processes enabled by machine learning. Chemical Engineering and Processing: Process Intensification, 2022, 180, 108671.	3.6	17
2	Process monitoring for quality—a feature selection method for highly unbalanced binary data. International Journal on Interactive Design and Manufacturing, 2022, 16, 557-572.	2.2	3
3	COVID-WideNet—A capsule network for COVID-19 detection. Applied Soft Computing Journal, 2022, 122, 108780.	7.2	23
4	Prognosis patients with COVID-19 using deep learning. BMC Medical Informatics and Decision Making, 2022, 22, 78.	3.0	5
5	Quality 4.0 – an evolution of Six Sigma DMAIC. International Journal of Lean Six Sigma, 2022, 13, 1200-1238.	3.3	10
6	Learning analytics: state of the art. International Journal on Interactive Design and Manufacturing, 2022, 16, 1209-1230.	2.2	24
7	Quality 4.0 – Green, Black and Master Black Belt Curricula. Procedia Manufacturing, 2021, 53, 748-759.	1.9	15
8	GBUO: "The Good, the Bad, and the Ugly" Optimizer. Applied Sciences (Switzerland), 2021, 11, 2042.	2.5	10
9	A General Modeling Approach for Shock Absorbers: 2 DoF MR Damper Case Study. Frontiers in Materials, 2021, 7, .	2.4	2
10	Damping Variation Effects in Vehicle Semi-active MR Suspensions: A Stress Concentration Analysis. Frontiers in Materials, 2021, 8, .	2.4	3
11	Quality 4.0: a review of big data challenges in manufacturing. Journal of Intelligent Manufacturing, 2021, 32, 2319-2334.	7.3	66
12	Introducing Dynamic Programming and Persistently Exciting into Data-Driven Model Predictive Control. Mathematical Problems in Engineering, 2021, 2021, 1-11.	1.1	0
13	EEG-Based Tool for Prediction of University Students' Cognitive Performance in the Classroom. Brain Sciences, 2021, 11, 698.	2.3	14
14	Application of Deep Learning on Student Engagement in e-learning environments. Computers and Electrical Engineering, 2021, 93, 107277.	4.8	46
15	Biometric applications in education. International Journal on Interactive Design and Manufacturing, 2021, 15, 365-380.	2.2	14
16	Iterative Data-Driven Control for Closed Loop with Two Unknown Controllers. Mathematical Problems in Engineering, 2021, 2021, 1-11.	1.1	0
17	Binary Spring Search Algorithm for Solving Various Optimization Problems. Applied Sciences (Switzerland), 2021, 11, 1286.	2.5	34
18	Process monitoring for quality – A multiple classifier system for highly unbalanced data. Heliyon, 2021, 7, e08123.	3.2	5

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19	Service Robots: Trends and Technology. Applied Sciences (Switzerland), 2021, 11, 10702.	2.5	49
20	Augmentation of Body-in-White Dimensional Quality Systems through Artificial Intelligence. , 2021, , .		0
21	Technologies for the future of learning: state of the art. International Journal on Interactive Design and Manufacturing, 2020, 14, 683-695.	2.2	48
22	Process-monitoring-for-quality â€" A machine learning-based modeling for rare event detection. Array, 2020, 7, 100034.	4.0	7
23	Control of Automotive Semi-Active MR Suspensions for In-Wheel Electric Vehicles. Applied Sciences (Switzerland), 2020, 10, 4522.	2.5	13
24	A deep learning and grad-CAM based color visualization approach for fast detection of COVID-19 cases using chest X-ray and CT-Scan images. Chaos, Solitons and Fractals, 2020, 140, 110190.	5.1	308
25	Novel Design Methodology for DC-DC Converters Applying Metaheuristic Optimization for Inductance Selection. Applied Sciences (Switzerland), 2020, 10, 4377.	2.5	12
26	Engineering education for smart 4.0 technology: a review. International Journal on Interactive Design and Manufacturing, 2020, 14, 789-803.	2.2	59
27	The effectiveness of computer-based simulations for numerical methods in engineering. International Journal on Interactive Design and Manufacturing, 2020, 14, 833-846.	2.2	5
28	Educational experiences with Generation Z. International Journal on Interactive Design and Manufacturing, 2020, 14, 847-859.	2.2	71
29	AquaVision: Automating the detection of waste in water bodies using deep transfer learning. Case Studies in Chemical and Environmental Engineering, 2020, 2, 100026.	6.1	68
30	Design Of Interactive Learning Cyber-Physical Tools for Mechanical Design Engineering Courses. , 2020, , .		0
31	Smart Electromobility: Interactive ecosystem of research, innovation, engineering, and entrepreneurship. International Journal on Interactive Design and Manufacturing, 2020, 14, 1443-1459.	2.2	3
32	Machine learning based novel cost-sensitive seizure detection classifier for imbalanced EEG data sets. International Journal on Interactive Design and Manufacturing, 2020, 14, 1491-1509.	2.2	29
33	A Spring Search Algorithm Applied to Engineering Optimization Problems. Applied Sciences (Switzerland), 2020, 10, 6173.	2.5	105
34	Energy Commitment for a Power System Supplied by Multiple Energy Carriers System using Following Optimization Algorithm. Applied Sciences (Switzerland), 2020, 10, 5862.	2.5	16
35	Interactive urban route evaluation system for smart electromobility. International Journal on Interactive Design and Manufacturing, 2020, 14, 1271-1283.	2.2	3
36	Competencies for Industry 4.0. International Journal on Interactive Design and Manufacturing, 2020, 14, 1511-1524.	2.2	76

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37	Mostla for engineering education: part 2 emerging technologies. International Journal on Interactive Design and Manufacturing, 2020, 14, 1461-1473.	2.2	5
38	Mostla for engineering education: Part 1 initial results. International Journal on Interactive Design and Manufacturing, 2020, 14, 1429-1441.	2.2	9
39	Application of deep learning for fast detection of COVID-19 in X-Rays using nCOVnet. Chaos, Solitons and Fractals, 2020, 138, 109944.	5.1	442
40	Incorporating the sustainable development goals in engineering education. International Journal on Interactive Design and Manufacturing, 2020, 14, 739-745.	2.2	26
41	Process intensification education contributes to sustainable development goals. Part 1. Education for Chemical Engineers, 2020, 32, 1-14.	4.8	42
42	Process intensification education contributes to sustainable development goals. Part 2. Education for Chemical Engineers, 2020, 32, 15-24.	4.8	28
43	A review of epileptic seizure detection using machine learning classifiers. Brain Informatics, 2020, 7, 5.	3.0	209
44	Correlation Between Temperature and COVID-19 (Suspected, Confirmed and Death) Cases based on Machine Learning Analysis. Journal of Pure and Applied Microbiology, 2020, 14, 1017-1024.	0.9	50
45	ANN Based MRAC-PID Controller Implementation for a Furuta Pendulum System Stabilization. Advances in Science, Technology and Engineering Systems, 2020, 5, 324-333.	0.5	3
46	Self-Balancing Robot Control Optimization Using PSO. , 2020, , .		2
47	Design, Implementation and Nonlinear Control Analysis of a Furuta Pendulum System. , 2019, , .		5
48	Transdisciplinary Learning Community: A Model to Enhance Collaboration between Higher Education Institutions and Society. , 2019, , .		6
49	Research Path that Improves Student Engagement. , 2019, , .		4
50	Signal Processing and Deep Learning Techniques for Power Quality Events Monitoring and Classification. Electric Power Components and Systems, 2019, 47, 1332-1348.	1.8	19
51	Process-monitoring-for-qualityâ€"A robust model selection criterion for the logistic regression algorithm. Manufacturing Letters, 2019, 22, 6-10.	2.2	3
52	Magneto-rheological dampersâ€"model influence on the semi-active suspension performance. Smart Materials and Structures, 2019, 28, 105030.	3.5	18
53	Comparison between Classic Control Systems Techniques against Adaptive and Nonlinear Control Techniques in a Lower Limb Prostheses. , 2019, , .		3
54	Knowledge Generation in Higher Education Institutions. , 2019, , .		2

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55	Virtual/Remote Labs for Automation Teaching: a Cost Effective Approach. IFAC-PapersOnLine, 2019, 52, 266-271.	0.9	27
56	Process-Monitoring-for-Quality â€" A Model Selection Criterion for Support Vector Machine. Procedia Manufacturing, 2019, 34, 1010-1017.	1.9	7
57	Process-Monitoring-for-Quality â€" A Model Selection Criterion for l - Regularized Logistic Regression. Procedia Manufacturing, 2019, 34, 832-839.	1.9	7
58	Process-Monitoring-for-Qualityâ€"A Model Selection Criterion for Genetic Programming. Lecture Notes in Computer Science, 2019, , 151-164.	1.3	4
59	Technological innovations and practices in engineering education: a review. International Journal on Interactive Design and Manufacturing, 2019, 13, 713-728.	2.2	61
60	Virtual reality laboratories: a review of experiences. International Journal on Interactive Design and Manufacturing, 2019, 13, 947-966.	2.2	64
61	Active learning in engineering education. A review of fundamentals, best practices and experiences. International Journal on Interactive Design and Manufacturing, 2019, 13, 909-922.	2.2	108
62	Bearing Fault Diagnosis Based on Optimal Time-Frequency Representation Method. IFAC-PapersOnLine, 2019, 52, 194-199.	0.9	16
63	New Approach based on Autoencoders to Monitor the Tool Wear Condition in HSM. IFAC-PapersOnLine, 2019, 52, 206-211.	0.9	19
64	Chatter Mitigation in Milling Process Using Discrete Time Sliding Mode Control with Type 2-Fuzzy Logic System. Applied Sciences (Switzerland), 2019, 9, 4380.	2.5	5
65	Intelligent Fault Diagnosis for Rotating Machines Using Deep Learning. Smart and Sustainable Manufacturing Systems, 2019, 3, 20190023.	0.7	2
66	A smart sensor for the measurements of strain and vibrations: a work in progress. , 2019, , .		0
67	Process-Monitoring-for- Quality â€" A Model Selection Criterion for Shallow Neural Networks. Proceedings of the Annual Conference of the Prognostics and Health Management Society Prognostics and Health Management Society Conference, 2019, 11, .	0.3	1
68	Process-monitoring-for-quality â€" A model selection criterion. Manufacturing Letters, 2018, 15, 55-58.	2.2	9
69	Full Vehicle Combinatory Efficient Damping Controller: Experimental Implementation. IEEE/ASME Transactions on Mechatronics, 2018, 23, 377-388.	5.8	6
70	Process-Monitoring-for-Qualityâ€"Applications. Manufacturing Letters, 2018, 16, 14-17.	2.2	17
71	Social collaboration software for virtual teams: case studies. International Journal on Interactive Design and Manufacturing, 2018, 12, 15-24.	2.2	10
72	The cross-coupling of lateral-longitudinal vehicle dynamics: Towards decentralized Fault-Tolerant Control Schemes. Mechatronics, 2018, 50, 377-393.	3.3	8

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73	Fault Detection in Spindles using Wavelets - State of the Art ⱬ ⱬAuthors thank to TecnolÃ³gico de Monterrey and CONACyT because their partial support.. IFAC-PapersOnLine, 2018, 51, 450-455.	0.9	4
74	Hˆž Observer for Damper Force in a Semi-Active Suspension. IFAC-PapersOnLine, 2018, 51, 764-769.	0.9	15
75	Parameter-Dependent Hˆž Filter for LPV Semi-Active Suspension Systems. IFAC-PapersOnLine, 2018, 51, 19-24.	0.9	12
76	Process-Monitoring-for-Quality â€" Big Models. Procedia Manufacturing, 2018, 26, 1167-1179.	1.9	23
77	Towards an Automatic System to Spindle Faults Detection. IFAC-PapersOnLine, 2018, 51, 1425-1430.	0.9	0
78	Active Control of Chatter in Milling Process Using Intelligent PD/PID Control. IEEE Access, 2018, 6, 72698-72713.	4.2	28
79	Engineering Education 4.0: â€" proposal for a new Curricula. , 2018, , .		48
80	Machine learning techniques for quality control in high conformance manufacturing environment. Advances in Mechanical Engineering, 2018, 10, 168781401875551.	1.6	89
81	Tire Force Estimation using a Proportional Integral Observer. Journal of Physics: Conference Series, 2017, 783, 012014.	0.4	8
82	Real time acquisition and processing of massive electro-encephalographic signals for modeling by nonlinear statistics. International Journal on Interactive Design and Manufacturing, 2017, 11, 427-433.	2.2	2
83	Machine Learning and Pattern Recognition Techniques for Information Extraction to Improve Production Control and Design Decisions. Lecture Notes in Computer Science, 2017, , 286-300.	1.3	10
84	Connectivity of a modular electric vehicle by the use of a mobile device. Advances in Mechanical Engineering, 2017, 9, 168781401770808.	1.6	4
85	Decentralized Controllers for the Steering and Velocity in Vehicles. IFAC-PapersOnLine, 2017, 50, 3708-3713.	0.9	0
86	Chassis Design for AWD Electrified Pick Up Truck. , 2016, , .		0
87	Fault diagnosis for an automotive suspension using particle filters. , 2016, , .		3
88	Experimental Platform for Teaching Control of Automotive Suspension. IFAC-PapersOnLine, 2016, 49, 372-377.	0.9	1
89	Teaching semi-active suspension control using an experimental platform. , 2016, , .		4
90	Chassis Control based on Fuzzy Logic. , 2016, , .		2

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91	Modeling, diagnosis and estimation of actuator faults in vehicle suspensions. Control Engineering Practice, 2016, 49, 173-186.	5.5	31
92	Current Trends in Competency Based Education. World Journal of Engineering and Technology, 2016, 04, 193-199.	0.5	13
93	Fault estimation methods for semi-active suspension systems. , 2015, , .		5
94	Semi-Active Suspension Control with LPV Mass Adaptation**Authors thank CONACyT (PCP projects) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 67-72.	0.9	5
95	Fault Detection for Automotive Shock Absorber. Journal of Physics: Conference Series, 2015, 659, 012037.	0.4	5
96	Global Chassis Control System Using Suspension, Steering, and Braking Subsystems. Mathematical Problems in Engineering, 2015, 2015, 1-18.	1.1	11
97	Adaptive Vibration Control System for MR Damper Faults. Shock and Vibration, 2015, 2015, 1-17.	0.6	7
98	Development of an Android OS Based Controller of a Double Motor Propulsion System for Connected Electric Vehicles and Communication Delays Analysis. Mathematical Problems in Engineering, 2015, 2015, 1-12.	1.1	0
99	Method for Modeling Electrorheological Dampers Using Its Dynamic Characteristics. Mathematical Problems in Engineering, 2015, 2015, 1-15.	1.1	5
100	Force Control System for an Automotive Semi-active Suspension**Authors thank CONACyT and CRNS for their partial support in the bilateral M_exico-France PCP projects 03/10 and 06/13.. IFAC-PapersOnLine, 2015, 48, 55-60.	0.9	4
101	Actuator Fault Diagnosis in a Heat Exchanger based on Classifiers - A Comparative Study. IFAC-PapersOnLine, 2015, 48, 1210-1215.	0.9	6
102	Evaluation of on–off semi-active vehicle suspension systems by using the hardware-in-the-loop approach and the software-in-the-loop approach. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2015, 229, 52-69.	1.9	13
103	Adaptive Road Profile Estimation in Semiactive Car Suspensions. IEEE Transactions on Control Systems Technology, 2015, 23, 2293-2305.	5.2	66
104	Plug and Play with a QoV Model - A Research Based Learning Approach. , 2015, , .		3
105	Online road profile estimation in automotive vehicles. , 2014, , .		5
106	Experimental ANN-based modeling of an adjustable damper. , 2014, , .		2
107	State observers for semi-active suspensions: Experimental results. , 2014, , .		1
108	Comparison of Heuristic Controllers for an Automotive Semi-Active Suspension. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 6307-6312.	0.4	1

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109	Influence of MR damper modeling on vehicle dynamics. Smart Materials and Structures, 2013, 22, 125031.	3.5	5
110	Fault detection for automotive semi-active dampers. , 2013, , .		6
111	Fault tolerant strategy for semi-active suspensions with LPV accommodation?. , 2013, , .		13
112	Comparison between a Model-free and Model-based Controller of an Automotive Semi-active Suspension System * *Authors thank to Tecnológico de Monterrey (Autotronics research chair) and CONACyT (PCP 03/2010) for their partial support.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 869-874.	0.4	6
113	Adaptive Semi-Active Suspension Design Using Gain-Scheduling* *Authors thank the Autotronics research chair at Tecnológico de Monterrey and CONACyT for the PCP 06/2007.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 845-850.	0.4	2
114	Applicative Fault Tolerant Control for semi-active suspension system: Preliminary results. , 2013, , .		2
115	Suspension control strategy for a fully electrified vehicle. , 2013, , .		0
116	Control of an Automotive Semi-Active Suspension. Mathematical Problems in Engineering, 2012, 2012, 1-21.	1.1	19
117	Fault Tolerant Control in a Semi-active Suspension*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1173-1178.	0.4	2
118	Efficiency of On-Off Semiactive Suspensions in a Pick-up Truck. SAE International Journal of Commercial Vehicles, 2012, 5, 333-342.	0.4	4
119	A Fault Detection Method for an Automotive Magneto-Rheological Damper. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1209-1214.	0.4	8
120	Magnetorheological damper—an experimental study. Journal of Intelligent Material Systems and Structures, 2012, 23, 1213-1232.	2.5	42
121	Control Strategies for an Automotive Suspension with a MR Damper. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 1820-1825.	0.4	16
122	Comparison of Artificial Neural Networks and Dynamic Principal Component Analysis for Fault Diagnosis. Lecture Notes in Computer Science, 2011, , 10-18.	1.3	2
123	A LPV Quarter of Car with Semi-active Suspension Model including Dynamic Input Saturation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 68-75.	0.4	5
124	Cost-effective supervisory control system in peripheral milling using HSM. Annual Reviews in Control, 2010, 34, 155-162.	7.9	14
125	Fault Diagnosis in a Heat Exchanger using Process History Based-Methods. Computer Aided Chemical Engineering, 2010, 28, 169-174.	0.5	7
126	MRAC + Hˆž Fault Tolerant Control for Linear Parameter Varying systems. , 2010, , .		3

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127	Comparison of MR damper models. , 2010, , .		1
128	MR-damper based control system. , 2009, , .		3
129	Design of experiments for MR damper modelling. , 2009, , .		6
130	Frequency and current effects in a MR damper. International Journal of Vehicle Autonomous Systems, 2009, 7, 121.	0.2	5
131	Glucose optimal control system in diabetes treatment. Applied Mathematics and Computation, 2009, 209, 19-30.	2.2	12
132	Control strategy for ride improvement. International Journal of Vehicle Autonomous Systems, 2009, 7, 141.	0.2	0
133	Leaks Detection in a Pipeline Using Artificial Neural Networks. Lecture Notes in Computer Science, 2009, , 637-644.	1.3	8
134	Fault Diagnosis of Industrial Systems with Bayesian Networks and Neural Networks. Lecture Notes in Computer Science, 2008, , 998-1008.	1.3	4
135	Intelligent monitoring and decision control system for peripheral milling process. Conference Proceedings IEEE International Conference on Systems, Man, and Cybernetics, 2008, , .	0.0	5
136	Decision Control System for HSM*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 70-74.	0.4	0
137	LOW-COST CUTTING TOOL DIAGNOSIS BASED ON SENSOR-FUSION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 141-146.	0.4	1
138	DESIGNING A COST-EFFECTIVE SUPERVISORY CONTROL SYSTEM FOR MACHINING PROCESSES. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 147-152.	0.4	3
139	Multi Sensor Data Fusion for High Speed Machining. Lecture Notes in Computer Science, 2007, , 1162-1172.	1.3	2
140	Optimal Sampling for Feature Extraction in Iris Recognition Systems. Lecture Notes in Computer Science, 2006, , 810-819.	1.3	0
141	An Application of Random and Hammersley Sampling Methods to Iris Recognition. Lecture Notes in Computer Science, 2006, , 520-529.	1.3	2
142	An Application of ARX Stochastic Models to Iris Recognition. International Federation for Information Processing, 2006, , 343-352.	0.4	0
143	Linear quadratic control problem in biomedical engineering. Computer Aided Chemical Engineering, 2005, 20, 1195-1200.	0.5	2
144	A Fault Detection Approach Based on Machine Learning Models. Lecture Notes in Computer Science, 2005, , 583-592.	1.3	3

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145	Sensor-Fusion System for Monitoring a CNC-Milling Center. Lecture Notes in Computer Science, 2005, , 1164-1174.	1.3	2
146	Dynamic modelling and control of industrial processes with particle filtering algorithms. Computer Aided Chemical Engineering, 2004, 18, 721-726.	0.5	2
147	Toward a New Approach for Online Fault Diagnosis Combining Particle Filtering and Parametric Identification. Lecture Notes in Computer Science, 2004, , 555-564.	1.3	1
148	Wrapper Components for Distributed Robotic Systems. Lecture Notes in Computer Science, 2004, , 882-891.	1.3	1
149	Fault Detection in Automotive Semi-Active Suspension: Experimental Results. , 0, , .		8
150	Adaptive iterative correlation tuning for closed loop system with two parametrised controllers*. International Journal of Systems Science, 0, , 1-15.	5.5	2
151	Application of Receiver Operating Characteristics (ROC) on the Prediction of Obesity. Brazilian Archives of Biology and Technology, 0, 63, .	0.5	13
152	Process-Monitoring-for-Quality - A Step Forward in the Zero Defects Vision. , 0, , .		10
153	Competency Based Education â€" Current Global Practices. , 0, , .		1