JosÃ© Boaventura-Cunha

List of Publications by Year
in descending order

72 papers	1,492 citations	430442 18 h-index	329751 37 g-index
78 all docs	78 docs citations	78 times ranked	1340 citing authors

#	Article	IF	Citations
1	Particle swarm optimization with fractional-order velocity. Nonlinear Dynamics, 2010, 61, 295-301.	2.7	196
2	Fractional Electrical Impedances in Botanical Elements. JVC/Journal of Vibration and Control, 2008, 14, 1389-1402.	1.5	136
3	Greenhouse air temperature predictive control using the particle swarm optimisation algorithm. Computers and Electronics in Agriculture, 2005, 49, 330-344.	3.7	134
4	Fractional order electromagnetics. Signal Processing, 2006, 86, 2637-2644.	2.1	91
5	Energy performance of Trombe walls: Adaptation of ISO 13790:2008(E) to the Portuguese reality. Energy and Buildings, 2014, 74, 111-119.	3.1	67
6	Greenhouse climate hierarchical fuzzy modelling. Control Engineering Practice, 2005, 13, 613-628.	3.2	65
7	Smartphone Applications Targeting Precision Agriculture Practicesâ€"A Systematic Review. Agronomy, 2020, 10, 855.	1.3	61
8	Localization and Mapping for Robots in Agriculture and Forestry: A Survey. Robotics, 2020, 9, 97.	2.1	60
9	Real-time parameter estimation of dynamic temperature models for greenhouse environmental control. Control Engineering Practice, 1997, 5, 1473-1481.	3.2	55
10	A networked platform for agricultural management systems. Computers and Electronics in Agriculture, 2001, 31, 75-90.	3.7	55
11	An experimental analysis of the Trombe wall temperature fluctuations for high range climate conditions: Influence of ventilation openings and shading devices. Energy and Buildings, 2017, 138, 546-558.	3.1	46
12	Chaos-based grey wolf optimizer for higher order sliding mode position control of a robotic manipulator. Nonlinear Dynamics, 2017, 90, 1353-1362.	2.7	44
13	Digital Technologies for Forest Supply Chain Optimization: Existing Solutions and Future Trends. Environmental Management, 2018, 62, 1108-1133.	1.2	44
14	Grape Bunch Detection at Different Growth Stages Using Deep Learning Quantized Models. Agronomy, 2021, 11, 1890.	1.3	35
15	Experimental and analytical approach on the Trombe wall thermal performance parameters characterization. Energy and Buildings, 2017, 150, 262-280.	3.1	28
16	A swarm intelligence-based tuning method for the sliding mode generalized predictive control. ISA Transactions, 2014, 53, 1501-1515.	3.1	24
17	Robotic grasping: from wrench space heuristics to deep learning policies. Robotics and Computer-Integrated Manufacturing, 2021, 71, 102176.	6.1	20
18	Review of nature and biologically inspired metaheuristics for greenhouse environment control. Transactions of the Institute of Measurement and Control, 2020, 42, 2338-2358.	1.1	19

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19	Controller System Design Using the Coefficient Diagram Method. Arabian Journal for Science and Engineering, 2016, 41, 3663-3681.	1.1	18
20	Bringing Semantics to the Vineyard: An Approach on Deep Learning-Based Vine Trunk Detection. Agriculture (Switzerland), 2021, 11, 131.	1.4	18
21	An analytical approach to assess the influence of the massive wall material, thickness and ventilation system on the Trombe wall thermal performance. Journal of Building Physics, 2018, 41, 445-468.	1.2	15
22	Smarter Robotic Sprayer System for Precision Agriculture. Electronics (Switzerland), 2021, 10, 2061.	1.8	15
23	A new brain emotional learning Simulink Â® toolbox for control systems design * *This work was funded by the ERDF â€“ European Regional Development Fund through the COMPETE Programme and by Portuguese funds through the FCT â€“ FundaÃ§Ã£o para a CiÃªncia e a Tecnologia within the project POCI-01-0145-FEDER-006961.. IFAC-PapersOnLine, 2017, 50, 16009-16014.	0.5	14
24	Modelling a biomass supply chain through discrete-event simulationâ^—â^—This work was supported by the FCT - FundaÃ§Ã£o para a CiÃªncia e Tecnologia through the PhD Studentship SFRH/BD/98032/2013, program POPH - Programa Operacional Potencial Humano and FSE - Fundo Social Europeu.. IFAC-PapersOnLine, 2016, 49, 84-89.	0.5	13
25	Solar data acquisition wireless network for agricultural applications. , 0, , .		12
26	Application of image processing techniques in the characterization of plant leafs. , 0, , .		12
27	A feasibility study of sliding mode predictive control for greenhouses. Optimal Control Applications and Methods, 2016, 37, 730-748.	1.3	12
28	Influence of Air Vents Management on Trombe Wall Temperature Fluctuations: An Experimental Analysis under Real Climate Conditions. Energies, 2021, 14, 5043.	1.6	11
29	Trombe wall thermal performance: Data mining techniques for indoor temperatures and heat flux forecasting. Energy and Buildings, 2021, 252, 111407.	3.1	11
30	Localization and Mapping on Agriculture Based on Point-Feature Extraction and Semiplanes Segmentation From 3D LiDAR Data. Frontiers in Robotics and AI, 2022, 9, 832165.	2.0	11
31	Teaching particle swarm optimization through an openâ€loop system identification project. Computer Applications in Engineering Education, 2014, 22, 227-237.	2.2	10
32	Particle filter refinement based on clustering procedures for high-dimensional localization and mapping systems. Robotics and Autonomous Systems, 2021, 137, 103725.	3.0	10
33	Automation and Control in Greenhouses: State-of-the-Art and Future Trends. Lecture Notes in Electrical Engineering, 2017, , 597-606.	0.3	9
34	Unimodal and Multimodal Perception for Forest Management: Review and Dataset. Computation, 2021, 9, 127.	1.0	9
35	Reconfigurable Grasp Planning Pipeline with Grasp Synthesis and Selection Applied to Picking Operations in Aerospace Factories. Robotics and Computer-Integrated Manufacturing, 2021, 67, 102032.	6.1	8
36	Multi-Objective Particle Swarm Optimization Design of PID Controllers. Lecture Notes in Computer Science, 2009, , 1222-1230.	1.0	8

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37	Blending Artificial Intelligence into PID Controller Design: A Biomedical Engineering Experiment. IFAC-PapersOnLine, 2016, 49, 366-371.	0.5	7
38	A Multilayer Model Predictive Control Methodology Applied to a Biomass Supply Chain Operational Level. Complexity, 2017, 2017, 1-10.	0.9	6
39	Framework Using ROS and SimTwo Simulator for Realistic Test of Mobile Robot Controllers. Lecture Notes in Electrical Engineering, 2015, , 751-759.	0.3	6
40	Overview of MPC applications in supply chains: Potential use and benefits in the management of forest-based supply chains. Forest Systems, 2015, 24, e039.	0.1	6
41	Optimized Fractional Order Sliding Mode Controller for Water Level in Irrigation Canal Pool. IFAC-PapersOnLine, 2017, 50, 7663-7668.	0.5	5
42	Trends in Gravitational Search Algorithm. Advances in Intelligent Systems and Computing, 2018, , 270-277.	0.5	5
43	Hydroponics Monitoring through UV-Vis Spectroscopy and Artificial Intelligence: Quantification of Nitrogen, Phosphorous and Potassium. Chemistry Proceedings, 2021, 5, .	0.1	5
44	Soil moisture sensor with built-in fault-detection capabilities. , 0, , .		4
45	Gantry crane control: A simulation case study. , 2013, , .		4
46	Comparative Analysis between LDR and HDR Images for Automatic Fruit Recognition and Counting. Journal of Sensors, 2017, 2017, 1-12.	0.6	4
47	Soft Computing Optimization for the Biomass Supply Chain Operational Planning. , 2018, , .		4
48	Evaluation of Hunting-Based Optimizers for a Quadrotor Sliding Mode Flight Controller. Robotics, 2020, 9, 22.	2.1	4
49	Long Term Solar Radiation Forecast Using Computational Intelligence Methods. Applied Computational Intelligence and Soft Computing, 2014, 2014, 1-14.	1.6	3
50	Forest-based supply chain modelling using the SimPy simulation framework. IFAC-PapersOnLine, 2016, 49, 90-95.	0.5	3
51	Model Predictive Control Applied to a Supply Chain Management Problem. Lecture Notes in Electrical Engineering, 2017, , 167-177.	0.3	3
52	PID Posicast Control for Uncertain Oscillatory Systems: A Practical Experiment. IFAC-PapersOnLine, 2018, 51, 416-421.	0.5	3
53	Innovating in Control Engineering Teaching/Learning with Smartphones. , 2019, , .		3
54	E-GRAFCET+: An Internet Based Multimedia Tool Refined. IFAC-PapersOnLine, 2015, 48, 111-116.	0.5	2

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55	Classroom partial flip for feedback control systems: A biomedical engineering experience. , 2017, , .		2
56	Greenhouse Heat Load Prediction Using a Support Vector Regression Model. Advances in Intelligent and Soft Computing, 2010, , 111-117.	0.2	2
57	Particle Swarm Optimization for Gantry Control: A Teaching Experiment. Lecture Notes in Computer Science, 2011, , 196-207.	1.0	2
58	Optimal Control of Air Temperature and Carbon Dioxide Concentration in Greenhouses. , 0, , .		1
59	Curve Fitting: Fitting Functions to Agricultural and Biological Data. , 0, , .		1
60	Swarm-based auto-tuning of PID posicast control for uncertain systems. , 2017, , .		1
61	Instrumentation and Control of an Industrial Sewing Station. , 2018, , .		1
62	FPGA Implementation of a Multi-Population PBIL Algorithm. , 2015, , .		1
63	Cyberphysical Network for Crop Monitoring and Fertigation Control. Lecture Notes in Computer Science, 2019, , 200-211.	1.0	1
64	A Silicon Probe with Integrated Microelectronics for Soil Moisture Measurements. , 0, , .		0
65	Evaluation of Plant Growth Models for a Soil Greenhouse Tomato Crop. , 0, , .		0
66	Fractional dynamic fitness functions for GA-based circuit design. , 2005, , .		0
67	Real-time Adaptive Control for Greenhouse Heating, Cooling and CO2 Enrichment. , 0, , .		0
68	Disturbance Rejection Improvement for the Sliding Mode Smith Predictor Based on Bio-inspired Tuning. Lecture Notes in Electrical Engineering, 2017, , 45-58.	0.3	0
69	Model Predictive Control of a Conveyor-Based Drying Process Applied to Cork Stoppers. Lecture Notes in Electrical Engineering, 2017, , 617-627.	0.3	0
70	Posicast Based Experiments to Motivate Undergraduates to Control Engineering. , 2018, , .		0
71	An Overview on Visual Sensing for Automatic Control on Smart Farming and Forest Management. , 2018, , .		0
72	On KNoT Meta-Platform for IoT-Based Control of Storage Grains. Lecture Notes in Computer Science, 2019, , 180-185.	1.0	0