

# JosÃ© M Maestre

## List of Publications by Year in descending order

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150  
papers

2,853  
citations

201575

27  
h-index

214721

47  
g-index

162  
all docs

162  
docs citations

162  
times ranked

1556  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Linear Programming Approach to Computing Safe Sets for Software Rejuvenation. , 2022, 6, 1214-1219.		6
2	Market-based clustering of model predictive controllers for maximizing collected energy by parabolic-trough solar collector fields. Applied Energy, 2022, 306, 117936.	5.1	13
3	Cyber-security in networked and distributed model predictive control. Annual Reviews in Control, 2022, 53, 338-355.	4.4	14
4	Distributed Model Predictive Control for Tracking: A Coalitional Clustering Approach. IEEE Transactions on Automatic Control, 2022, 67, 6873-6880.	3.6	5
5	A Multi-model Based Centralized MPC on the Quadruple-tank with Guaranteed Stability. Lecture Notes in Electrical Engineering, 2022, , 72-82.	0.3	0
6	Developing an automatic conjunctive surface-groundwater operating system for sustainable agricultural water distribution. Computers and Electronics in Agriculture, 2022, 194, 106774.	3.7	4
7	Fast Clustering for Multi-agent Model Predictive Control. IEEE Transactions on Control of Network Systems, 2022, 9, 1544-1555.	2.4	1
8	Double Q-PI architecture for smart model-free control of canals. Computers and Electronics in Agriculture, 2022, 197, 106940.	3.7	6
9	Gray Wolf Optimization for Scheduling Irrigation Water. Journal of Irrigation and Drainage Engineering - ASCE, 2022, 148, .	0.6	5
10	Coalitional model predictive control with different inter-agent interaction modes. European Journal of Control, 2022, 68, 100676.	1.6	1
11	Coalitional Model Predictive Control on Freeways Traffic Networks. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 6772-6783.	4.7	20
12	A Data-Based Model Predictive Decision Support System for Inventory Management in Hospitals. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 2227-2236.	3.9	9
13	Data-Driven Human Modeling: Quantifying Personal Tendency Toward Laziness. , 2021, 5, 1219-1224.		3
14	A light clustering model predictive control approach to maximize thermal power in solar parabolic-trough plants. Solar Energy, 2021, 214, 531-541.	2.9	27
15	Robust Coalitional Model Predictive Control With Predicted Topology Transitions. IEEE Transactions on Control of Network Systems, 2021, 8, 1869-1880.	2.4	3
16	Introducing an economic agricultural water distribution in a hyper-arid region: a case study in Iran. Journal of Hydroinformatics, 2021, 23, 548-566.	1.1	8
17	Modular Feedback Control of Networked Systems by Clustering: A Drinking Water Network Case Study. Processes, 2021, 9, 389.	1.3	7
18	Spatial irradiance estimation in a thermosolar power plant by a mobile robot sensor network. Solar Energy, 2021, 220, 735-744.	2.9	11

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19	Hierarchical distributed model predictive control based on fuzzy negotiation. Expert Systems With Applications, 2021, 176, 114836.	4.4	13
20	A survey on clustering methods for distributed and networked control systems. Annual Reviews in Control, 2021, 52, 75-90.	4.4	29
21	Scenario-based defense mechanism against vulnerabilities in Lagrange-based DMPC. Control Engineering Practice, 2021, 114, 104879.	3.2	7
22	Clustering Switching Regions for Feedback Controllers: a Convex Approach. IEEE Transactions on Control of Network Systems, 2021, , 1-1.	2.4	3
23	Model-based PI design for irrigation canals with faulty communication networks. , 2021, , .		1
24	Distributed Model Predictive Control based on Dual Decomposition with Neural-Network-based Warm Start. , 2021, , .		1
25	Control predictivo de sistemas ciberfísicos. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2021, 19, 1-12.	0.6	0
26	Resilient distributed model predictive control for energy management of interconnected microgrids. Optimal Control Applications and Methods, 2020, 41, 146-169.	1.3	28
27	Multicriteria optimal operation of a microgrid considering risk analysis, renewable resources, and model predictive control. Optimal Control Applications and Methods, 2020, 41, 94-106.	1.3	10
28	Potential assessment of non-automatic and automatic modernization alternatives for the improvement of water distribution supplied by surface-water resources: A case study in Iran. Agricultural Water Management, 2020, 230, 105964.	2.4	14
29	Reducing losses in earthen agricultural water conveyance and distribution systems by employing automatic control systems. Computers and Electronics in Agriculture, 2020, 168, 105122.	3.7	27
30	Multi-Objective Model Predictive Control for Real-Time Operation of a Multi-Reservoir System. Water (Switzerland), 2020, 12, 1898.	1.2	19
31	Decentralized ellipsoidal state estimation for linear model predictive control of an irrigation canal. Journal of Hydroinformatics, 2020, 22, 593-605.	1.1	13
32	Generalizing Fuzzy SARSA Learning for Real-Time Operation of Irrigation Canals. Water (Switzerland), 2020, 12, 2407.	1.2	12
33	Evaluating Optimization Objectives in Linear Quadratic Control Applied to Open Canal Automation. Journal of Water Resources Planning and Management - ASCE, 2020, 146, .	1.3	11
34	Grid Code-Dependent Frequency Control Optimization in Multi-Terminal DC Networks. Energies, 2020, 13, 6485.	1.6	4
35	A Coalitional Model Predictive Control for the Energy Efficiency of Next-Generation Cellular Networks. Energies, 2020, 13, 6546.	1.6	9
36	Design of PI Controllers for Irrigation Canals Based on Linear Matrix Inequalities. Water (Switzerland), 2020, 12, 855.	1.2	15

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37	Distributed Linear Quadratic Regulator Robust to Communication Dropouts. IFAC-PapersOnLine, 2020, 53, 3072-3078.	0.5	3
38	Coalitional MPC with predicted topology transitions. IFAC-PapersOnLine, 2020, 53, 3342-3347.	0.5	4
39	An LMI-Based Design Method for Modular Observers. , 2020, , .		0
40	Efficient Design of Fault Detection Architectures for Power Networks by using Game Theory. IFAC-PapersOnLine, 2020, 53, 13638-13643.	0.5	0
41	No-Regret Learning for Coalitional Model Predictive Control. IFAC-PapersOnLine, 2020, 53, 3439-3444.	0.5	0
42	A nonlinear distributed model predictive scheme for systems based on Hammerstein model. IFAC-PapersOnLine, 2020, 53, 3361-3366.	0.5	1
43	A Topology-Switching Coalitional Control and Observation Scheme with Stability Guarantees. IFAC-PapersOnLine, 2020, 53, 6477-6482.	0.5	4
44	An LMI-Based Approach for Semivalues Constraints in Coalitional Feedback Control. IFAC-PapersOnLine, 2020, 53, 3892-3897.	0.5	0
45	A Modular Feedback Approach for Distributed Control. IFAC-PapersOnLine, 2020, 53, 4020-4025.	0.5	2
46	Actuation attacks on constrained linear systems: a set-theoretic analysis. IFAC-PapersOnLine, 2020, 53, 6963-6968.	0.5	3
47	Fast Charge of Li-ion Batteries using a Two-Layer Distributed MPC with Electro-Chemical and Thermal Constraints. , 2019, , .		2
48	Quality-Aware Control for Optimizing Meat Supply Chains. , 2019, , .		0
49	Min-Max Coalitional Model Predictive Control Algorithm. , 2019, , .		2
50	Developing a centralized automatic control system to increase flexibility of water delivery within predictable and unpredictable irrigation water demands. Computers and Electronics in Agriculture, 2019, 163, 104862.	3.7	24
51	A Resilient Approach for Distributed MPC-Based Economic Dispatch in Interconnected Microgrids. , 2019, , .		3
52	A Lightsaber to Introduce Students to Microcontrollers. IFAC-PapersOnLine, 2019, 52, 139-143.	0.5	3
53	Multi-Scenario Model Predictive Control Based on Genetic Algorithms for Level Regulation of Open Water Systems under Ensemble Forecasts. Water Resources Management, 2019, 33, 3025-3040.	1.9	17
54	An economic-operational framework for optimum agricultural water distribution in irrigation districts without water marketing. Agricultural Water Management, 2019, 221, 348-361.	2.4	27

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55	A Coalitional Control Scheme with Topology-Switchings Convexity Guarantees. , 2019, , .		3
56	An Application of the Logarithmic Mean Divisia Index Method for Predictive Control Schemes to a Power Flow Network* Financial support by the H2020 ADG-ERC project OCONTSOLAR (ID 789051) and by the MINECO-Spain projects DPI2017-86918-R and DPI2016-78338-R (CONFIGURA) is gratefully acknowledged... , 2019, , .		1
57	Decentralized ellipsoidal state estimation for Model Predictive Control in irrigation canals. , 2019, , .		0
58	Energy-Aware Resource Management in Heterogeneous Cellular Networks With Hybrid Energy Sources. IEEE Transactions on Network and Service Management, 2019, 16, 279-293.	3.2	36
59	Scenario-Based Hierarchical and Distributed MPC for Water Resources Management with Dynamical Uncertainty. Water Resources Management, 2019, 33, 677-696.	1.9	18
60	Coalitional Control for Self-Organizing Agents. IEEE Transactions on Automatic Control, 2018, 63, 2883-2897.	3.6	33
61	Coalitional Planning for Energy Efficiency of HetNets Powered by Hybrid Energy Sources. IEEE Transactions on Vehicular Technology, 2018, 67, 6573-6584.	3.9	13
62	Operational performance improvements in irrigation canals to overcome groundwater overexploitation. Agricultural Water Management, 2018, 204, 234-246.	2.4	45
63	Vulnerabilities in Lagrange-based distributed model predictive control. Optimal Control Applications and Methods, 2018, 39, 601-621.	1.3	15
64	An application of economic model predictive control to inventory management in hospitals. Control Engineering Practice, 2018, 71, 120-128.	3.2	30
65	Resilient Distributed Energy Management for Systems of Interconnected Microgrids. , 2018, , .		7
66	A Distributed Model Predictive Control Scheme with Robustness Against Noncompliant Controllers. , 2018, , .		2
67	Life lessons from and for distributed MPC â€œ Part 2: Choice of decision makers. IFAC-PapersOnLine, 2018, 51, 107-111.	0.5	2
68	Life lessons from and for distributed MPC â€œ Part 1: Dynamics of cooperation. IFAC-PapersOnLine, 2018, 51, 101-106.	0.5	1
69	Robust Coalitional Distributed Model Predictive Control Algorithm with Stability via Terminal Constraint. , 2018, , .		2
70	Partitioning of Large-Scale Systems using Game-Theoretic Coalitional Methods. , 2018, , .		3
71	Vulnerabilities in Distributed Model Predictive Control based on Jacobi-Gauss Decomposition. , 2018, , .		3
72	Atomicity and Non-Anonymity in Population-Like Games for the Energy Efficiency of Hybrid-Power HetNets. IEEE Transactions on Network and Service Management, 2018, 15, 1600-1614.	3.2	3

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73	A Game Theoretical Randomized Method for Large-Scale Systems Partitioning. IEEE Access, 2018, 6, 42245-42263.	2.6	16
74	Energy Efficiency of Hybrid-Power HetNets: A Population-like Games Approach. , 2018, , .		0
75	Modern Operation of Main Irrigation Canals Suffering from Water Scarcity Based on an Economic Perspective. Journal of Irrigation and Drainage Engineering - ASCE, 2017, 143, .	0.6	22
76	On the comparison of stochastic model predictive control strategies applied to a hydrogen-based microgrid. Journal of Power Sources, 2017, 343, 161-173.	4.0	78
77	Coalitional Control: Cooperative Game Theory and Control. IEEE Control Systems, 2017, 37, 53-69.	1.0	78
78	Harsanyi Power Solutions in Coalitional Control Systems. IEEE Transactions on Automatic Control, 2017, 62, 3369-3381.	3.6	12
79	Distributed predictive control with minimization of mutual disturbances. Automatica, 2017, 77, 31-43.	3.0	54
80	Networked control design for coalitional schemes using game-theoretic methods. Automatica, 2017, 78, 320-332.	3.0	40
81	The Banzhaf value as a design tool in coalitional control. Systems and Control Letters, 2017, 104, 21-30.	1.3	16
82	A practical approach for hybrid distributed MPC. Journal of Process Control, 2017, 55, 30-41.	1.7	20
83	Node Aggregation for Enhancing PageRank. IEEE Access, 2017, 5, 19799-19811.	2.6	4
84	An assessment of different user-BS association policies for green HetNets in off-grid environments. Transactions on Emerging Telecommunications Technologies, 2017, 28, e3227.	2.6	5
85	Efficient multi-scenario Model Predictive Control for water resources management with ensemble streamflow forecasts. Advances in Water Resources, 2017, 109, 58-68.	1.7	37
86	Non-centralized control for flow-based distribution networks: A game-theoretical insight. Journal of the Franklin Institute, 2017, 354, 5771-5796.	1.9	11
87	A PageRank based coalitional control scheme. International Journal of Control, Automation and Systems, 2017, 15, 1983-1990.	1.6	13
88	Stochastic model predictive control approaches applied to drinking water networks. Optimal Control Applications and Methods, 2017, 38, 541-558.	1.3	31
89	Model Predictive Control for Water Level Control in the Case of Spills. Journal of Irrigation and Drainage Engineering - ASCE, 2017, 143, .	0.6	4
90	Robot coordination to create collaborative panoramic images. , 2017, , .		0

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91	Mobile Model Predictive Control for the Évora irrigation test canal. IFAC-PapersOnLine, 2017, 50, 6570-6575.	0.5	5
92	Model predictive controller with traffic offloading for energy efficiency in hetnets powered by renewable energies. , 2017, , .		1
93	Vulnerabilities in Lagrange-Based DMPC in the Context of Cyber-Security. , 2017, , .		1
94	Model predictive control for optimal treatment in a spatial cancer game. , 2017, , .		5
95	Scenario-based defense mechanism for distributed model predictive control. , 2017, , .		10
96	Distributed MPC with minimization of mutual disturbance sets. , 2016, , .		6
97	Application of robust model predictive control to a renewable hydrogen-based microgrid. , 2016, , .		10
98	Binary search algorithm for mixed integer optimization: Application to energy management in a microgrid. , 2016, , .		5
99	A cooperative game theory approach to the PageRank problem. , 2016, , .		4
100	Improving Operation of a Main Irrigation Canal Suffering from Inflow Fluctuation within a Centralized Model Predictive Control System: Case Study of Roodasht Canal, Iran. Journal of Irrigation and Drainage Engineering - ASCE, 2016, 142, .	0.6	23
101	Stock management in hospital pharmacy using chance-constrained model predictive control. Computers in Biology and Medicine, 2016, 72, 248-255.	3.9	36
102	Cooperative game theory tools to detect critical nodes in distributed control systems. , 2016, , .		3
103	Multi-objective model-free control based on population dynamics and cooperative games. , 2015, , .		5
104	Time-Varying Scheme for Noncentralized Model Predictive Control of Large-Scale Systems. Mathematical Problems in Engineering, 2015, 2015, 1-17.	0.6	20
105	Equitable Water Distribution in Main Irrigation Canals with Constrained Water Supply. Water Resources Management, 2015, 29, 3315-3328.	1.9	28
106	An assessment of coalitional control in water systems. , 2015, , .		10
107	An application of the Shapley value to perform system partitioning. , 2015, , .		12
108	Coalitional control: A bottom-up approach. , 2015, , .		4

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109	Human-in-the-loop control of an irrigation canal using time instant optimization Model Predictive Control. , 2015, , .		8
110	An algorithm with low computational requirements to constrain the Shapley value in coalitional networks. , 2015, , .		3
111	A comparison of distributed MPC schemes on a hydroâ€power plant benchmark. Optimal Control Applications and Methods, 2015, 36, 306-332.	1.3	29
112	A comparison of the economic benefits of centralized and distributed model predictive control strategies for optimal and sub-optimal mine dewatering system designs. Applied Thermal Engineering, 2015, 90, 1172-1183.	3.0	6
113	Human-in-the-Loop Model Predictive Control of an Irrigation Canal [Applications of Control]. IEEE Control Systems, 2015, 35, 19-29.	1.0	28
114	TecnologÃa y sociedad: Â¿Por quÃ© no llega el hogar digital?. Informes De La Construccion, 2015, 67, e090.	0.1	1
115	An application of chance-constrained model predictive control to inventory management in Hospitalary Pharmacy. , 2014, , .		5
116	Human in the loop model Predictive Control: an irrigation canal case study. , 2014, , .		27
117	Constraints on the shapley value for a coalitional control system. , 2014, , .		11
118	Application of robust model predictive control to inventory management in hospitalary pharmacy. , 2014, , .		2
119	Coalitional model predictive control of an irrigation canal. Journal of Process Control, 2014, 24, 314-325.	1.7	93
120	Distributed Model Predictive Control Made Easy. Intelligent Systems, Control and Automation: Science and Engineering, 2014, , .	0.3	144
121	A coalitional control scheme with applications to cooperative game theory. Optimal Control Applications and Methods, 2014, 35, 592-608.	1.3	69
122	Distributed Model Predictive Control: An overview of features and research opportunities. , 2014, , .		7
123	Distributed Model Predictive Control: An Overview and Roadmap of Future Research Opportunities. IEEE Control Systems, 2014, 34, 87-97.	1.0	282
124	On the Assessment of Tree-Based and Chance-Constrained Predictive Control Approaches applied to Drinking Water Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 6240-6245.	0.4	13
125	An Iterative Design Method for Coalitional Control Networks with Constraints on the Shapley Value. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 1188-1193.	0.4	19
126	Distributed MPC Based on Agent Negotiation. Intelligent Systems, Control and Automation: Science and Engineering, 2014, , 465-477.	0.3	4



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127	Application of an In-Line Storage Strategy to Improve the Operational Performance of Main Irrigation Canals Using Model Predictive Control. Journal of Irrigation and Drainage Engineering - ASCE, 2013, 139, 635-644.	0.6	31
128	Collaborative Tasks Between Robots Based on the Digital Home Compliant Protocol over UPnP. Journal of Intelligent and Robotic Systems: Theory and Applications, 2013, 72, 357-371.	2.0	4
129	Integration of service robots in the smart home by means of UPnP: A surveillance robot case study. Robotics and Autonomous Systems, 2013, 61, 153-160.	3.0	47
130	Distributed tree-based model predictive control on a drainage water system. Journal of Hydroinformatics, 2013, 15, 335-347.	1.1	35
131	Coalitional control: An irrigation canal case study. , 2013, , .		13
132	Distributed tree-based model predictive control on an open water system. , 2012, , .		8
133	A probabilistic approach for testing feedback controllers with application to congestion control. International Journal of Control, Automation and Systems, 2012, 10, 835-840.	1.6	0
134	Análisis y minimización del riesgo de rotura de stock aplicado a la gestión en farmacia hospitalaria. Farmacia Hospitalaria, 2012, 36, 130-134.	0.6	2
135	Towards a new open communication standard between homes and service robots, the DHCompliant case. Robotics and Autonomous Systems, 2012, 60, 889-900.	3.0	14
136	Wireless sensor network analysis through a coalitional game: Application to a distributed Kalman filter. , 2011, , .		4
137	An application of Cooperative Game Theory to Distributed Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 9121-9126.	0.4	12
138	Robots in the smart home: a project towards interoperability. International Journal of Ad Hoc and Ubiquitous Computing, 2011, 7, 192.	0.3	11
139	Distributed model predictive control based on a cooperative game. Optimal Control Applications and Methods, 2011, 32, 153-176.	1.3	142
140	Distributed model predictive control based on agent negotiation. Journal of Process Control, 2011, 21, 685-697.	1.7	112
141	A hierarchical distributed model predictive control approach to irrigation canals: A risk mitigation perspective. Journal of Process Control, 2011, 21, 787-799.	1.7	70
142	A comparative analysis of distributed MPC techniques applied to the HD-MPC four-tank benchmark. Journal of Process Control, 2011, 21, 800-815.	1.7	160
143	Hierarchical distributed model predictive control for risk mitigation: An irrigation canal case study. , 2011, , .		10
144	Integration of Service Robots in the Smart Home. , 2011, , 115-142.		0

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145	A Case Study of the Application of UPnP in Robotic and Home Automation Services. , 2010, , .		0
146	Distributed receding horizon Kalman filter. , 2010, , .		10
147	A control theoretical approach to congestion control of TCP/AQM networks. , 2009, , .		0
148	A distributed MPC scheme with low communication requirements. , 2009, , .		22
149	Distributed MPC: a supply chain case study. , 2009, , .		20
150	Distributed MPC based on a cooperative game. , 2009, , .		8