

# Maria Seron

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

132  
papers

2,726  
citations

24  
h-index

49  
g-index

149  
ext. papers

3,332  
ext. citations

3.7  
avg, IF

5.28  
L-index

#	Paper	IF	Citations
132	Robust model predictive control of constrained linear systems with bounded disturbances. <i>Automatica</i> , <b>2005</b> , 41, 219-224	5.7	812
131	A systematic method to obtain ultimate bounds for perturbed systems. <i>International Journal of Control</i> , <b>2007</b> , 80, 167-178	1.5	122
130	Positive invariant sets for fault tolerant multisensor control schemes. <i>International Journal of Control</i> , <b>2010</b> , 83, 2622-2640	1.5	102
129	Multisensor switching control strategy with fault tolerance guarantees. <i>Automatica</i> , <b>2008</b> , 44, 88-97	5.7	100
128	Feedback limitations in nonlinear systems: from Bode integrals to cheap control. <i>IEEE Transactions on Automatic Control</i> , <b>1999</b> , 44, 829-833	5.9	94
127	Robust output-feedback model predictive control for systems with unstructured uncertainty. <i>Automatica</i> , <b>2008</b> , 44, 1933-1943	5.7	74
126	Model Predictive Control of Distributed Air-Conditioning Loads to Compensate Fluctuations in Solar Power. <i>IEEE Transactions on Smart Grid</i> , <b>2017</b> , 8, 3055-3065	10.7	69
125	Nonlinear adaptive control of feedback passive systems. <i>Automatica</i> , <b>1995</b> , 31, 1053-1060	5.7	56
124	Robust fault estimation and compensation for LPV systems under actuator and sensor faults. <i>Automatica</i> , <b>2015</b> , 52, 294-301	5.7	54
123	Global analytical model predictive control with input constraints		49
122	Sensor fault-tolerant vector control of induction motors. <i>IET Control Theory and Applications</i> , <b>2010</b> , 4, 1707-1724	2.5	45
121	Robust model predictive control: reflections and opportunities. <i>Journal of Control and Decision</i> , <b>2014</b> , 1, 115-148	0.9	38
120	Fault Tolerant Control Allowing Sensor Healthy-to-Faulty and Faulty-to-Healthy Transitions. <i>IEEE Transactions on Automatic Control</i> , <b>2012</b> , 57, 1657-1669	5.9	36
119	From vehicular platoons to general networked systems: String stability and related concepts. <i>Annual Reviews in Control</i> , <b>2017</b> , 44, 157-172	10.3	35
118	Reference governor design for tracking problems with fault detection guarantees. <i>Journal of Process Control</i> , <b>2012</b> , 22, 829-836	3.9	33
117	Limiting performance of optimal linear filters. <i>Automatica</i> , <b>1999</b> , 35, 189-199	5.7	32
116	Enlarged terminal sets guaranteeing stability of receding horizon control. <i>Systems and Control Letters</i> , <b>2002</b> , 47, 57-63	2.4	29

115	Anti-windup and Model Predictive Control: Reflections and Connections*. <i>European Journal of Control</i> , <b>2000</b> , 6, 467-477	2.5	29
114	Componentwise ultimate bound and invariant set computation for switched linear systems. <i>Automatica</i> , <b>2010</b> , 46, 1897-1901	5.7	28
113	Actuator fault tolerant control of systems with polytopic uncertainties using set-based diagnosis and virtual-actuator-based reconfiguration. <i>Automatica</i> , <b>2017</b> , 75, 182-190	5.7	27
112	Control design with guaranteed ultimate bound for perturbed systems. <i>Automatica</i> , <b>2008</b> , 44, 1815-1821	5.7	27
111	Bounds and invariant sets for a class of switching systems with delayed-state-dependent perturbations. <i>Automatica</i> , <b>2013</b> , 49, 748-754	5.7	25
110	Probabilistic set invariance and ultimate boundedness. <i>Automatica</i> , <b>2012</b> , 48, 2670-2676	5.7	25
109	Actuator fault tolerant multi-controller scheme using set separation based diagnosis. <i>International Journal of Control</i> , <b>2010</b> , 83, 2328-2339	1.5	25
108	Receding horizon control applied to optimal mine planning. <i>Automatica</i> , <b>2006</b> , 42, 1337-1342	5.7	24
107	Fault tolerant control using virtual actuators and set-separation detection principles. <i>International Journal of Robust and Nonlinear Control</i> , <b>2012</b> , 22, 709-742	3.6	22
106	Actuator fault-tolerant control based on set separation. <i>International Journal of Adaptive Control and Signal Processing</i> , <b>2010</b> , 24, 1070-1090	2.8	21
105	Systematic ultimate bound computation for sampled-data systems with quantization. <i>Automatica</i> , <b>2007</b> , 43, 1117-1123	5.7	21
104	Non-stationary stochastic embedding for transfer function estimation. <i>Automatica</i> , <b>2002</b> , 38, 47-62	5.7	21
103	Lagrangian duality between constrained estimation and control. <i>Automatica</i> , <b>2005</b> , 41, 935-944	5.7	21
102	Fault-tolerant control of systems with convex polytopic linear parameter varying model uncertainty using virtual-sensor-based controller reconfiguration. <i>Annual Reviews in Control</i> , <b>2013</b> , 37, 146-153	10.3	19
101	. <i>IEEE Transactions on Automatic Control</i> , <b>2010</b> , 55, 1531-1543	5.9	19
100	Bounds and invariant sets for a class of discrete-time switching systems with perturbations. <i>International Journal of Control</i> , <b>2014</b> , 87, 371-383	1.5	18
99	Robust multisensor fault tolerant model-following MPC design for constrained systems. <i>International Journal of Applied Mathematics and Computer Science</i> , <b>2012</b> , 22, 211-223	1.7	18
98	A Flatness-Based Iterative Method for Reference Trajectory Generation in Constrained NMPC. <i>Lecture Notes in Control and Information Sciences</i> , <b>2009</b> , 325-333	0.5	18

97	Robustification of backstepping against input unmodeled dynamics. <i>IEEE Transactions on Automatic Control</i> , <b>2000</b> , 45, 1358-1363	5.9	18
96	Predictive metamorphic control. <i>Automatica</i> , <b>2013</b> , 49, 3670-3676	5.7	16
95	Robust multiactuator fault-tolerant MPC design for constrained systems. <i>International Journal of Robust and Nonlinear Control</i> , <b>2013</b> , 23, 1828-1845	3.6	16
94	Multisensor fusion fault tolerant control. <i>Automatica</i> , <b>2011</b> , 47, 1461-1466	5.7	16
93	A revisit to inverse optimality of linear systems. <i>International Journal of Control</i> , <b>2012</b> , 85, 1506-1514	1.5	16
92	Fundamental design tradeoffs in filtering, prediction, and smoothing. <i>IEEE Transactions on Automatic Control</i> , <b>1997</b> , 42, 1240-1251	5.9	15
91	Vehicular platoons in cyclic interconnections. <i>Automatica</i> , <b>2018</b> , 94, 283-293	5.7	15
90	Integrated sensor and actuator fault-tolerant control. <i>International Journal of Control</i> , <b>2013</b> , 86, 689-708	1.5	14
89	Virtual actuator for Lure systems with Lipschitz-continuous nonlinearity. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2012</b> , 45, 222-227		14
88	Nonlinear tracking and input disturbance rejection with application to pH control. <i>Journal of Process Control</i> , <b>1996</b> , 6, 195-202	3.9	14
87	Control system design issues for unstable linear systems with saturated inputs. <i>IET Control Theory and Applications</i> , <b>1995</b> , 142, 335-344		14
86	Predictive control: a historical perspective. <i>International Journal of Robust and Nonlinear Control</i> , <b>2012</b> , 22, 1296-1313	3.6	13
85	Sensor fault-tolerant control of a magnetic levitation system. <i>International Journal of Robust and Nonlinear Control</i> , <b>2010</b> , 20, 2108-2121	3.6	13
84	Splines and polynomial tools for flatness-based constrained motion planning. <i>International Journal of Systems Science</i> , <b>2012</b> , 43, 1396-1411	2.3	11
83	Methods for trajectory generation in a magnetic-levitation system under constraints <b>2010</b> ,		11
82	Cheap control tracking performance for non-right-invertible systems. <i>International Journal of Robust and Nonlinear Control</i> , <b>2002</b> , 12, 1253-1273	3.6	11
81	Performance degradation in feedback control due to constraints. <i>IEEE Transactions on Automatic Control</i> , <b>2003</b> , 48, 1381-1385	5.9	11
80	A fundamental control performance limit for a class of positive nonlinear systems. <i>Automatica</i> , <b>2018</b> , 95, 14-22	5.7	10

79	Ultimate boundedness and regions of attraction of frequency droop controlled microgrids with secondary control loops. <i>Automatica</i> , <b>2017</b> , 81, 416-428	5.7	9
78	Application of nonlinear model predictive control to an industrial induction heating furnace. <i>Annual Reviews in Control</i> , <b>2013</b> , 37, 271-277	10.3	9
77	Invariant-set-based fault tolerant control using virtual sensors. <i>IET Control Theory and Applications</i> , <b>2011</b> , 5, 1092-1103	2.5	9
76	Finitely parameterised implementation of receding horizon control for constrained linear systems <b>2002</b> ,		9
75	Sensitivity limitations in nonlinear feedback control. <i>Systems and Control Letters</i> , <b>1996</b> , 27, 249-254	2.4	9
74	Invariant-set-based fault diagnosis in Lure systems. <i>International Journal of Robust and Nonlinear Control</i> , <b>2014</b> , 24, 2405-2422	3.6	8
73	Bank of Virtual Actuators for Fault Tolerant Control. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2011</b> , 44, 5436-5441		8
72	Robust MPC design for fault tolerance of constrained multisensor linear systems <b>2010</b> ,		8
71	Fault tolerant control using virtual actuators and invariant-set based fault detection and identification <b>2009</b> ,		8
70	Geometric characterization of multivariable quadratically stabilizing quantizers. <i>International Journal of Control</i> , <b>2006</b> , 79, 845-857	1.5	8
69	Diagnosis and actuator fault tolerant control in vehicle active suspension <b>2007</b> ,		8
68	A dissipativity approach to robustness in constrained model predictive control <b>2007</b> ,		7
67	A cost-effective sparse communication strategy for networked linear control systems: an SVD-based approach. <i>International Journal of Robust and Nonlinear Control</i> , <b>2015</b> , 25, 2223-2240	3.6	6
66	On robust stability and set invariance of switched linear parameter varying systems. <i>International Journal of Control</i> , <b>2015</b> , 88, 2588-2597	1.5	6
65	Robust actuator fault compensation accounting for uncertainty in the fault estimation. <i>International Journal of Adaptive Control and Signal Processing</i> , <b>2014</b> , 28, 1440-1453	2.8	6
64	A fault tolerant control scheme based on sensor-actuation channel switching and dwell time. <i>International Journal of Robust and Nonlinear Control</i> , <b>2014</b> , 24, 775-792	3.6	6
63	Preview and Feedforward in Model Predictive Control: Conceptual and Design Issues*. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2011</b> , 44, 5555-5560		6
62	Fault-tolerant control of a magnetic levitation system using virtual-sensor-based reconfiguration <b>2010</b> ,		6

61	DTFC versus MPC for induction motor control reconfiguration after inverter faults <b>2010</b> ,		6
60	A performance bound for optimal insulin infusion in individuals with Type 1 diabetes ingesting a meal with slow postprandial response. <i>Automatica</i> , <b>2019</b> , 103, 531-537	5.7	5
59	On splines and polynomial tools for constrained motion planning <b>2010</b> ,		5
58	Componentwise ultimate bound computation for switched linear systems <b>2009</b> ,		5
57	Multisensor fusion fault-tolerant control with diagnosis via a set separation principle <b>2009</b> ,		5
56	Optimization opportunities in mining, metal and mineral processing. <i>Annual Reviews in Control</i> , <b>2008</b> , 32, 17-32	10.3	5
55	Multivariable quadratically-stabilizing quantizers with finite density. <i>Automatica</i> , <b>2008</b> , 44, 1880-1885	5.7	5
54	On fundamental limitations for rudder roll stabilization of ships		5
53	A systematic stochastic design strategy achieving an optimal tradeoff between peak BGL and probability of hypoglycaemic events for individuals having type 1 diabetes mellitus. <i>Biomedical Signal Processing and Control</i> , <b>2020</b> , 57, 101813	4.9	5
52	Stochastic model predictive control: Insights and performance comparisons for linear systems. <i>International Journal of Robust and Nonlinear Control</i> , <b>2019</b> , 29, 5038-5057	3.6	5
51	Vehicular Platoons in cyclic interconnections with constant inter-vehicle spacing. <i>IFAC-PapersOnLine</i> , <b>2017</b> , 50, 2511-2516	0.7	4
50	Continuous-time probabilistic ultimate bounds and invariant sets: Computation and assignment. <i>Automatica</i> , <b>2016</b> , 71, 98-105	5.7	4
49	Eigenvalue assignment for componentwise ultimate bound minimisation in LTI discrete-time systems <b>2013</b> ,		4
48	Minimum-time trajectory generation for constrained linear systems using flatness and B-splines. <i>International Journal of Control</i> , <b>2011</b> , 84, 1565-1585	1.5	4
47	A combined model predictive control/space vector modulation (MPC-SVM) strategy for direct torque and flux control of induction motors <b>2011</b> ,		4
46	Zonotopic ultimate bounds for linear systems with bounded disturbances. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2011</b> , 44, 9224-9229		4
45	Multisensor fusion fault-tolerant control of a magnetic levitation system <b>2010</b> ,		4
44	On invariant sets and closed-loop boundedness of Lure-type nonlinear systems by LPV-embedding. <i>International Journal of Robust and Nonlinear Control</i> , <b>2016</b> , 26, 1092-1111	3.6	4

43	Actuator fault tolerant control based on probabilistic ultimate bounds. <i>ISA Transactions</i> , <b>2019</b> , 84, 20-30	5.5	4
42	Integration of invariant-set-based FDI with varying sampling rate virtual actuator and controller. <i>International Journal of Adaptive Control and Signal Processing</i> , <b>2016</b> , 30, 393-411	2.8	3
41	Control Limitations in Models of T1DM and the Robustness of Optimal Insulin Delivery. <i>Journal of Diabetes Science and Technology</i> , <b>2018</b> , 12, 926-936	4.1	3
40	Fault-tolerant fusion-based MPC with sensor recovery for constrained LPV systems. <i>International Journal of Robust and Nonlinear Control</i> , <b>2018</b> , 28, 3589-3605	3.6	3
39	Set Invariance Approach for Fault Detection and Isolation in Lure Systems by LPV-embedding. <i>IFAC-PapersOnLine</i> , <b>2015</b> , 48, 1036-1041	0.7	3
38	Flatness-based Minimum-time Trajectory Generation for Constrained Linear Systems Using B-Splines. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2011</b> , 44, 6674-6679		3
37	Robust MPC multicontroller design for actuator fault tolerance of constrained systems. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2011</b> , 44, 4678-4683		3
36	Speed-sensorless control of induction motors with improved fault tolerance against current sensor failure <b>2010</b> ,		3
35	Inverse minimax optimality of model predictive control policies. <i>Systems and Control Letters</i> , <b>2009</b> , 58, 31-38	2.4	3
34	Opportunities and Challenges in the Application of Nonlinear MPC to Industrial Problems. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2012</b> , 45, 39-49		3
33	A modified relay autotuner for systems having large broadband disturbances. <i>Automatica</i> , <b>2018</b> , 94, 178-185	1.85	3
32	Actuator Fault Diagnosis Using Probabilistic Ultimate Bounds. <i>IEEE Latin America Transactions</i> , <b>2016</b> , 14, 2550-2555	0.7	2
31	Ultimate boundedness of droop controlled microgrids with secondary loops <b>2014</b> ,		2
30	A fault tolerant control scheme based on sensor-actuation channel switching and dwell time <b>2010</b> ,		2
29	Fault detection, isolation, and recovery using spline tools and differential flatness with application to a magnetic levitation system <b>2010</b> ,		2
28	Reference governor for tracking with fault detection capabilities <b>2010</b> ,		2
27	On Infimum Quantization Density for Multiple-input Systems		2
26	Fault Tolerant Control for Lure Systems Via LPV Embedding. <i>Advanced Science Letters</i> , <b>2016</b> , 22, 2719-2723	2.3	2

25	Open-cut Mine Planning via Closed-loop Receding-horizon Optimal Control <b>2007</b> , 43-62		2
24	Set theoretic approach to fault-tolerant control of linear parameter-varying systems with sensor reintegration. <i>International Journal of Control</i> , <b>2019</b> , 92, 858-874	1.5	2
23	Fault estimation and controller compensation in Lure systems by LPV-embedding. <i>International Journal of Control</i> , <b>2019</b> , 92, 1914-1927	1.5	2
22	Characterisation of Optimal Responses to Pulse Inputs in the Bergman Minimal Model. <i>IFAC-PapersOnLine</i> , <b>2017</b> , 50, 15163-15168	0.7	1
21	Feedback and feedforward control in the context of model predictive control with application to the management of type 1 diabetes mellitus. <i>Control Engineering Practice</i> , <b>2019</b> , 89, 228-237	3.9	1
20	Ultimate bound minimisation by state feedback in discrete-time switched linear systems under arbitrary switching. <i>Nonlinear Analysis: Hybrid Systems</i> , <b>2016</b> , 21, 84-102	4.5	1
19	Eigenstructure Assignment for Componentwise Ultimate Bound Minimization in Discrete-Time Linear Systems. <i>IEEE Transactions on Automatic Control</i> , <b>2016</b> , 61, 3669-3675	5.9	1
18	Fault-tolerant control under controller-driven sampling using a virtual actuator strategy <b>2013</b> ,		1
17	Ultimate bounds and regions of attraction for two-inverter microgrids with primary and secondary frequency control loops <b>2015</b> ,		1
16	An investigation of set-theoretic methods for fault detection in Lure systems <b>2014</b> ,		1
15	A set separation sensor switching approach to the fault tolerant control of linear parameter varying systems <b>2014</b> ,		1
14	A discussion on sensor recovery techniques for fault tolerant multisensor schemes. <i>International Journal of Systems Science</i> , <b>2014</b> , 45, 1708-1722	2.3	1
13	Switching strategy for sensor fault tolerant vector control of doubly fed induction machines <b>2010</b> ,		1
12	Improved multisensor switching scheme for fault tolerant control <b>2009</b> ,		1
11	Set-based Actuator Fault Diagnosis in Lure Systems. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2012</b> , 45, 234-239		1
10	When does QP yield the exact solution to constrained NMPC?. <i>International Journal of Control</i> , <b>2009</b> , 82, 812-821	1.5	1
9	Quadratic Leaky Integrate-and-Fire Neural Network Tuned with an Evolution-Strategy for a Simulated 3D Biped Walking Controller <b>2008</b> ,		1
8	Towards a Simple Sampled-Data Control Law for Stably Invertible Linear Systems. <i>IFAC-PapersOnLine</i> , <b>2020</b> , 53, 4582-4587	0.7	1



7	Fundamental performance properties of a general class of observers for linear systems having predictable disturbances. <i>Automatica</i> , <b>2020</b> , 113, 108717	5.7	1
6	Lyapunov-Function-Free Backstepping Design with Application to the Lorenz System. <i>IFAC-PapersOnLine</i> , <b>2018</b> , 51, 223-228	0.7	1
5	Integrated framework for constrained minimum-time trajectory generation, fault detection and reconfiguration: A case-study. <i>International Journal of Adaptive Control and Signal Processing</i> , <b>2016</b> , 30, 986-1001	2.8	0
4	Maximal controllability of input constrained unstable systems by the addition of implicit constraints. <i>Automatica</i> , <b>2011</b> , 47, 2260-2266	5.7	
3	Fault-Tolerant Control of Convex Polytopic Linear Parameter Varying Systems Using Virtual-Sensor-Based Reconfiguration. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2012</b> , 45, 240-246		
2	BACKLASH COMPENSATION USING RECEDING HORIZON CONTROL. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2005</b> , 38, 508-513		
1	Geometric MPC for three-phase AC inverters with performance bounds. <i>International Journal of Control</i> , <b>2020</b> , 93, 156-169	1.5	