Lalo Magni

List of Publications by Year
in descending order

113 papers	7,326 citations	53660 45 h-index	58464 82 g-index
114 all docs	114 docs citations	114 times ranked	3449 citing authors

#	Article	IF	Citations
1	Diabetes: Models, Signals, and Control. IEEE Reviews in Biomedical Engineering, 2009, 2, 54-96.	13.1	431
2	Fully Integrated Artificial Pancreas in Type 1 Diabetes. Diabetes, 2012, 61, 2230-2237.	0.3	343
3	A stabilizing model-based predictive control algorithm for nonlinear systems. Automatica, 2001, 37, 1351-1362.	3.0	308
4	Model Predictive Control of Type 1 Diabetes: An in Silico Trial. Journal of Diabetes Science and Technology, 2007, 1, 804-812.	1.3	265
5	Stabilizing receding-horizon control of nonlinear time-varying systems. IEEE Transactions on Automatic Control, 1998, 43, 1030-1036.	3.6	194
6	Robust model predictive control for nonlinear discrete-time systems. International Journal of Robust and Nonlinear Control, 2003, 13, 229-246.	2.1	189
7	2 month evening and night closed-loop glucose control in patients with type 1 diabetes under free-living conditions: a randomised crossover trial. Lancet Diabetes and Endocrinology,the, 2015, 3, 939-947.	5.5	189
8	Multinational Study of Subcutaneous Model-Predictive Closed-Loop Control in Type 1 Diabetes Mellitus: Summary of the Results. Journal of Diabetes Science and Technology, 2010, 4, 1374-1381.	1.3	188
9	Evaluating the Efficacy of Closed-Loop Glucose Regulation via Control-Variability Grid Analysis. Journal of Diabetes Science and Technology, 2008, 2, 630-635.	1.3	185
10	LIONSIMBA: A Matlab Framework Based on a Finite Volume Model Suitable for Li-Ion Battery Design, Simulation, and Control. Journal of the Electrochemical Society, 2016, 163, A1192-A1205.	1.3	184
11	Safety of Outpatient Closed-Loop Control: First Randomized Crossover Trials of a Wearable Artificial Pancreas. Diabetes Care, 2014, 37, 1789-1796.	4.3	168
12	Min-max Model Predictive Control of Nonlinear Systems: A Unifying Overview on Stability. European Journal of Control, 2009, 15, 5-21.	1.6	163
13	Model predictive control of glucose concentration in type I diabetic patients: An in silico trial. Biomedical Signal Processing and Control, 2009, 4, 338-346.	3.5	162
14	Robust Model Predictive Control With Integral Sliding Mode in Continuous-Time Sampled-Data Nonlinear Systems. IEEE Transactions on Automatic Control, 2011, 56, 556-570.	3.6	156
15	Modular Closed-Loop Control of Diabetes. IEEE Transactions on Biomedical Engineering, 2012, 59, 2986-2999.	2.5	150
16	Stabilizing decentralized model predictive control of nonlinear systems. Automatica, 2006, 42, 1231-1236.	3.0	149
17	Cooperative Constrained Control of Distributed Agents With Nonlinear Dynamics and Delayed Information Exchange: A Stabilizing Receding-Horizon Approach. IEEE Transactions on Automatic Control, 2008, 53, 324-338.	3.6	139
18	Regional Input-to-State Stability for Nonlinear Model Predictive Control. IEEE Transactions on Automatic Control, 2006, 51, 1548-1553.	3.6	133

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19	Closed-Loop Artificial Pancreas Using Subcutaneous Glucose Sensing and Insulin Delivery and a Model Predictive Control Algorithm: Preliminary Studies in Padova and Montpellier. Journal of Diabetes Science and Technology, 2009, 3, 1014-1021.	1.3	127
20	Stability margins of nonlinear receding-horizon control via inverse optimality. Systems and Control Letters, 1997, 32, 241-245.	1.3	123
21	Model Predictive Control of Continuous-Time Nonlinear Systems With Piecewise Constant Control. IEEE Transactions on Automatic Control, 2004, 49, 900-906.	3.6	114
22	Nonlinear Model Predictive Control. Lecture Notes in Control and Information Sciences, 2009, , .	0.6	110
23	MPC based Artificial Pancreas: Strategies for individualization and meal compensation. Annual Reviews in Control, 2012, 36, 118-128.	4.4	101
24	Decentralized MPC of nonlinear systems: An input-to-state stability approach. International Journal of Robust and Nonlinear Control, 2007, 17, 1651-1667.	2.1	100
25	Day-and-Night Closed-Loop Glucose Control in Patients With Type 1 Diabetes Under Free-Living Conditions: Results of a Single-Arm 1-Month Experience Compared With a Previously Reported Feasibility Study of Evening and Night at Home. Diabetes Care, 2016, 39, 1151-1160.	4.3	98
26	Run-to-Run Tuning of Model Predictive Control for Type 1 Diabetes Subjects: In Silico Trial. Journal of Diabetes Science and Technology, 2009, 3, 1091-1098.	1.3	95
27	Day and Night Closed-Loop Control in Adults With Type 1 Diabetes. Diabetes Care, 2013, 36, 3882-3887.	4.3	95
28	First Use of Model Predictive Control in Outpatient Wearable Artificial Pancreas. Diabetes Care, 2014, 37, 1212-1215.	4.3	95
29	Artificial Pancreas: Model Predictive Control Design from Clinical Experience. Journal of Diabetes Science and Technology, 2013, 7, 1470-1483.	1.3	94
30	Output feedback and tracking of nonlinear systems with model predictive control. Automatica, 2001, 37, 1601-1607.	3.0	93
31	Robust Model Predictive Control of Nonlinear Systems With Bounded and State-Dependent Uncertainties. IEEE Transactions on Automatic Control, 2009, 54, 1681-1687.	3.6	85
32	Multicenter outpatient dinner/overnight reduction of hypoglycemia and increased time of glucose in target with a wearable artificial pancreas using modular model predictive control in adults with type 1 diabetes. Diabetes, Obesity and Metabolism, 2015, 17, 468-476.	2.2	84
33	Toward a Run-to-Run Adaptive Artificial Pancreas: In Silico Results. IEEE Transactions on Biomedical Engineering, 2018, 65, 479-488.	2.5	84
34	A recedingâ€“horizon approach to the nonlinear Hâˆž control problem. Automatica, 2001, 37, 429-435.	3.0	82
35	Robustness and Robust Design of MPC for Nonlinear Discrete-Time Systems. , 2007, , 239-254.		82
36	Randomized Summer Camp Crossover Trial in 5- to 9-Year-Old Children: Outpatient Wearable Artificial Pancreas Is Feasible and Safe. Diabetes Care, 2016, 39, 1180-1185.	4.3	79

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37	Individualized model predictive control for the artificial pancreas: In silico evaluation of closed-loop glucose control. IEEE Control Systems, 2018, 38, 86-104.	1.0	77
38	An approach to output-feedback MPC of stochastic linear discrete-time systems. Automatica, 2015, 55, 140-149.	3.0	75
39	Min-max model predictive control of nonlinear systems using discontinuous feedbacks. IEEE Transactions on Automatic Control, 2003, 48, 1750-1755.	3.6	72
40	Control to Range for Diabetes: Functionality and Modular Architecture. Journal of Diabetes Science and Technology, 2009, 3, 1058-1065.	1.3	72
41	On the robustness of receding-horizon control with terminal constraints. IEEE Transactions on Automatic Control, 1996, 41, 451-453.	3.6	71
42	In Silico Preclinical Trials: Methodology and Engineering Guide to Closed-Loop Control in Type 1 Diabetes Mellitus. Journal of Diabetes Science and Technology, 2009, 3, 269-282.	1.3	70
43	Asynchronous Networked MPC With ISM for Uncertain Nonlinear Systems. IEEE Transactions on Automatic Control, 2017, 62, 4305-4317.	3.6	64
44	A probabilistic approach to Model Predictive Control. , 2013, , .		62
45	Stabilizing Predictive Control of Nonlinear ARX Models. Automatica, 1997, 33, 1691-1697.	3.0	57
46	Individually Adaptive Artificial Pancreas in Subjects with Type 1 Diabetes: A One-Month Proof-of-Concept Trial in Free-Living Conditions. Diabetes Technology and Therapeutics, 2017, 19, 560-571.	2.4	56
47	Switched model predictive control for performance enhancement. International Journal of Control, 2008, 81, 1859-1869.	1.2	52
48	Real-time model predictive control for the optimal charging of a lithium-ion battery. , 2015, , .		48
49	Model predictive control with integral action for artificial pancreas. Control Engineering Practice, 2018, 77, 86-94.	3.2	46
50	Multivariable nonlinear predictive control of cement mills. IEEE Transactions on Control Systems Technology, 1999, 7, 502-508.	3.2	44
51	Multicenter Closed-Loop Insulin Delivery Study Points to Challenges for Keeping Blood Glucose in a Safe Range by a Control Algorithm in Adults and Adolescents with Type 1 Diabetes from Various Sites. Diabetes Technology and Therapeutics, 2014, 16, 613-622.	2.4	43
52	Model individualization for artificial pancreas. Computer Methods and Programs in Biomedicine, 2019, 171, 133-140.	2.6	39
53	Multicenter Closed-Loop/Hybrid Meal Bolus Insulin Delivery with Type 1 Diabetes. Diabetes Technology and Therapeutics, 2014, 16, 623-632.	2.4	38
54	Remote Blood Glucose Monitoring in mHealth Scenarios: A Review. Sensors, 2016, 16, 1983.	2.1	37

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55	Efficient NMPC of unstable periodic systems using approximate infinite horizon closed loop costing. Annual Reviews in Control, 2004, 28, 37-45.	4.4	34
56	Stabilizing model predictive control of nonlinear continuous time systems. Annual Reviews in Control, 2004, 28, 1-11.	4.4	33
57	Model-based event-triggered robust MPC/ISM. , 2014, , .		32
58	Therapy-driven Deep Glucose Forecasting. Engineering Applications of Artificial Intelligence, 2020, 87, 103255.	4.3	32
59	A multi-model structure for model predictive control. Annual Reviews in Control, 2004, 28, 47-52.	4.4	31
60	Multivariable predictive control for vibrating structures: An application. Control Engineering Practice, 2011, 19, 1087-1098.	3.2	31
61	Evaluating the Experience of Children With Type 1 Diabetes and Their Parents Taking Part in an Artificial Pancreas Clinical Trial Over Multiple Days in a Diabetes Camp Setting. Diabetes Care, 2016, 39, 2158-2164.	4.3	30
62	Automatic adaptation of basal therapy for Type 1 diabetic patients: A Run-to-Run approach. Biomedical Signal Processing and Control, 2017, 31, 539-549.	3.5	30
63	On robust tracking with non-linear model predictive control. International Journal of Control, 2002, 75, 399-407.	1.2	28
64	On the solution of the tracking problem for non-linear systems with MPC. International Journal of Systems Science, 2005, 36, 477-484.	3.7	28
65	Neural Network Implementation of Nonlinear Receding-Horizon Control. Neural Computing and Applications, 1999, 8, 86-92.	3.2	26
66	Multirate sliding mode disturbance compensation for model predictive control. International Journal of Robust and Nonlinear Control, 2015, 25, 2984-3003.	2.1	25
67	Predictive control of thermal Power Plants. International Journal of Robust and Nonlinear Control, 2004, 14, 415-433.	2.1	24
68	Modeling and Control of Diabetes: Towards the Artificial Pancreas. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 7092-7101.	0.4	24
69	Tracking of non-square nonlinear continuous time systems with piecewise constant model predictive control. Journal of Process Control, 2007, 17, 631-640.	1.7	23
70	A hybrid stochastic-deterministic input design method for active fault diagnosis. , 2013, , .		23
71	Monitoring Artificial Pancreas Trials Through Agent-based Technologies. Journal of Diabetes Science and Technology, 2014, 8, 216-224.	1.3	23
72	Postprandial Glucose Regulation via KNN Meal Classification in Type 1 Diabetes. , 2019, 3, 230-235.		23

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73	Robust stabilization of a nonlinear cement mill model. IEEE Transactions on Automatic Control, 2001, 46, 618-623.	3.6	22
74	Hierarchical Model Predictive/Sliding Mode Control of Nonlinear Constrained Uncertain Systems. IFAC-PapersOnLine, 2015, 48, 102-109.	0.5	22
75	Bringing the Artificial Pancreas Home: Telemedicine Aspects. Journal of Diabetes Science and Technology, 2011, 5, 1381-1386.	1.3	20
76	Robust predictive control of systems with uncertain impulse response. Automatica, 1996, 32, 1475-1479.	3.0	19
77	Improved postprandial glucose control with a customized Model Predictive Controller. , 2015, , .		19
78	On the stabilization of nonlinear discrete-time systems with output feedback. International Journal of Robust and Nonlinear Control, 2004, 14, 1379-1391.	2.1	16
79	A Probabilistic Approach to Fault Diagnosis of Industrial Systems. IEEE Transactions on Control Systems Technology, 2004, 12, 950-955.	3.2	16
80	A robust MPC/ISM hierarchical multi-loop control scheme for robot manipulators. , 2013, , .		16
81	On optimality of nonlinear model predictive control. Systems and Control Letters, 2007, 56, 58-61.	1.3	15
82	Designing an artificial pancreas architecture: the AP@home experience. Medical and Biological Engineering and Computing, 2015, 53, 1271-1283.	1.6	15
83	Artificial Pancreas: In Silico Study Shows No Need of Meal Announcement and Improved Time in Range of Glucose With Intraperitoneal vs. Subcutaneous Insulin Delivery. IEEE Transactions on Medical Robotics and Bionics, 2021, 3, 306-314.	2.1	15
84	Control design for nonlinear systems: trading robustness and performance with the model predictive control approach. IET Control Theory and Applications, 2005, 152, 333-339.	1.7	14
85	Sampled-Data Model Predictive Control for Nonlinear Time-Varying Systems: Stability and Robustness. , 2007, , 115-129.		14
86	Optimization of the Start-up Procedure of a Combined Cycle Power Plant. , 2006, , .		12
87	Stochastic Model Predictive Control of constrained linear systems with additive uncertainty. , 2009, , .		12
88	Hypoglycemia Prevention via Personalized Glucose-Insulin Models Identified in Free-Living Conditions. Journal of Diabetes Science and Technology, 2019, 13, 1008-1016.	1.3	12
89	Robust receding - horizon control of nonlinear systems with state dependent uncertainties: An input-to-state stability approach. , 2008, , .		10
90	Automatic adaptation of basal therapy for Type 1 diabetic patients: a Run-to-Run approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 2070-2075.	0.4	10

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91	A mixed integer SDP approach for the optimal placement of energy storage devices in power grids with renewable penetration. , 2015, , .		10
92	A fault detection and isolation method for complex industrial systems. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2000, 30, 860-865.	3.4	8
93	Input-to-State Stability for Nonlinear Model Predictive Control. , 2006, , .		7
94	An Overview of Nonlinear Model Predictive Control. Lecture Notes in Control and Information Sciences, 2010, , 107-117.	0.6	7
95	A Constrained Model Predictive Controller for an Artificial Pancreas. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 10144-10149.	0.4	7
96	Robustness of receding horizon control for nonlinear discrete-time systems. Lecture Notes in Control and Information Sciences, 1999, , 408-421.	0.6	6
97	Artificial Pancreas: from Control-to-Range to Control-to-Target * *Corresponding author: Gian Paolo Incremona, Dipartimento di Ingegneria Industriale e dellâ€™Informazione, University of Pavia, Via Ferrata 5, 27100 Pavia, Italy. IFAC-PapersOnLine, 2017, 50, 7737-7742.	0.5	5
98	Switch Detection in Genetic Regulatory Networks. , 2007, , 754-757.		5
99	Closing the Loop. Diabetes Technology and Therapeutics, 2013, 15, S-29-S-39.	2.4	4
100	Optimal charging of a Li-ion cell: A hybrid Model Predictive Control approach. , 2016, , .		4
101	Kalman Filter Estimation of the Coal Flow in Power Plants. , 0, , .		3
102	Multivariable predictive control of cement mills. , 0, , .		2
103	Design methodology for diagnostic strategies for industrial systems. International Journal of Systems Science, 2002, 33, 505-512.	3.7	2
104	A Nonlinear Model Predictive Control Scheme with Multirate Integral Sliding Mode *. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 232-237.	0.4	2
105	Model Predictive Control of Type 1 Diabetes added to Conventional Therapy. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 7108-7113.	0.4	2
106	Model Predictive Control of Type 1 Diabetes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 99-106.	0.4	2
107	Deployment of modular MPC for type 1 diabetes control: the Italian experience 2008â€“2016. , 2019, , 153-182.		2
108	Industry 4.0: Mathematical model for monitoring sterilization processes. , 2019, , .		2

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109	Improving Diabetes Conventional Therapy via Machine Learning Modeling. , 2019, , .		2
110	Adaptive and Individualized Artificial Pancreas for Precision Management of Type 1 Diabetes. , 2022, , 305-313.		2
111	Embedded implementation of modular closed-loop control of diabetes and in silico validation. , 2013, , .		0
112	From In- to Out-patient Artificial Pancreas Studies: Results And New Developments. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 255-262.	0.4	0
113	Closing the Loop. Diabetes Technology and Therapeutics, 2015, 17, S-27-S-38.	2.4	0