

Lorenzo Fagiano

List of Publications by Year in descending order

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124
papers

3,365
citations

172207

29
h-index

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125
all docs

125
docs citations

125
times ranked

1899
citing authors

#	ARTICLE	IF	CITATIONS
1	The scenario approach for Stochastic Model Predictive Control with bounds on closed-loop constraint violations. <i>Automatica</i> , 2014, 50, 3009-3018.	3.0	241
2	Robust Model Predictive Control via Scenario Optimization. <i>IEEE Transactions on Automatic Control</i> , 2013, 58, 219-224.	3.6	195
3	High Altitude Wind Energy Generation Using Controlled Power Kites. <i>IEEE Transactions on Control Systems Technology</i> , 2010, 18, 279-293.	3.2	171
4	Future emerging technologies in the wind power sector: A European perspective. <i>Renewable and Sustainable Energy Reviews</i> , 2019, 113, 109270.	8.2	140
5	Vehicle Yaw Control via Second-Order Sliding-Mode Technique. <i>IEEE Transactions on Industrial Electronics</i> , 2008, 55, 3908-3916.	5.2	131
6	Adaptive receding horizon control for constrained MIMO systems. <i>Automatica</i> , 2014, 50, 3019-3029.	3.0	123
7	Robust vehicle yaw control using an active differential and IMC techniques. <i>Control Engineering Practice</i> , 2007, 15, 923-941.	3.2	113
8	Generalized terminal state constraint for model predictive control. <i>Automatica</i> , 2013, 49, 2622-2631.	3.0	109
9	Data-driven control of nonlinear systems: An on-line direct approach. <i>Automatica</i> , 2017, 75, 1-10.	3.0	100
10	Automatic Crosswind Flight of Tethered Wings for Airborne Wind Energy: Modeling, Control Design, and Experimental Results. <i>IEEE Transactions on Control Systems Technology</i> , 2014, 22, 1433-1447.	3.2	99
11	Set Membership approximation theory for fast implementation of Model Predictive Control laws. <i>Automatica</i> , 2009, 45, 45-54.	3.0	91
12	KiteGen: A revolution in wind energy generation. <i>Energy</i> , 2009, 34, 355-361.	4.5	89
13	Randomized Solutions to Convex Programs with Multiple Chance Constraints. <i>SIAM Journal on Optimization</i> , 2013, 23, 2479-2501.	1.2	87
14	Stochastic model predictive control of LPV systems via scenario optimization. <i>Automatica</i> , 2013, 49, 1861-1866.	3.0	85
15	Optimization of airborne wind energy generators. <i>International Journal of Robust and Nonlinear Control</i> , 2012, 22, 2055-2083.	2.1	81
16	Power Kites for Wind Energy Generation [Applications of Control]. <i>IEEE Control Systems</i> , 2007, 27, 25-38.	1.0	76
17	High-Altitude Wind Power Generation. <i>IEEE Transactions on Energy Conversion</i> , 2010, 25, 168-180.	3.7	75
18	Comparing Internal Model Control and Sliding-Mode Approaches for Vehicle Yaw Control. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2009, 10, 31-41.	4.7	68

#	ARTICLE	IF	CITATIONS
19	On the design and tuning of linear model predictive control for wind turbines. <i>Renewable Energy</i> , 2015, 80, 664-673.	4.3	66
20	Real-Time Optimization and Adaptation of the Crosswind Flight of Tethered Wings for Airborne Wind Energy. <i>IEEE Transactions on Control Systems Technology</i> , 2015, 23, 434-448.	3.2	54
21	Nonlinear stochastic model predictive control via regularized polynomial chaos expansions. , 2012, , .		49
22	Nonlinear model predictive control from data: a set membership approach. <i>International Journal of Robust and Nonlinear Control</i> , 2014, 24, 123-139.	2.1	48
23	Industry engagement with control research: Perspective and messages. <i>Annual Reviews in Control</i> , 2020, 49, 1-14.	4.4	47
24	Electricity in the air: Insights from two decades of advanced control research and experimental flight testing of airborne wind energy systems. <i>Annual Reviews in Control</i> , 2021, 52, 330-357.	4.4	44
25	On Sensor Fusion for Airborne Wind Energy Systems. <i>IEEE Transactions on Control Systems Technology</i> , 2014, 22, 930-943.	3.2	41
26	Direct feedback control design for nonlinear systems. <i>Automatica</i> , 2013, 49, 849-860.	3.0	37
27	Learning-based predictive control for linear systems: A unitary approach. <i>Automatica</i> , 2019, 108, 108473.	3.0	35
28	Randomized Model Predictive Control for stochastic linear systems. , 2012, , .		34
29	Stability control of 4WS vehicles using robust IMC techniques. <i>Vehicle System Dynamics</i> , 2008, 46, 991-1011.	2.2	32
30	Automatic Retraction and Full-Cycle Operation for a Class of Airborne Wind Energy Generators. <i>IEEE Transactions on Control Systems Technology</i> , 2016, 24, 594-608.	3.2	30
31	On the take-off of airborne wind energy systems based on rigid wings. <i>Renewable Energy</i> , 2017, 107, 473-488.	4.3	30
32	Design of a Small-Scale Prototype for Research in Airborne Wind Energy. <i>IEEE/ASME Transactions on Mechatronics</i> , 2015, 20, 166-177.	3.7	27
33	Approximate NMPC for vehicle stability: Design, implementation and SIL testing. <i>Control Engineering Practice</i> , 2010, 18, 630-639.	3.2	26
34	Comparing rear wheel steering and rear active differential approaches to vehicle yaw control. <i>Vehicle System Dynamics</i> , 2010, 48, 529-546.	2.2	26
35	Efficient Model Predictive Control for Nonlinear Systems via Function Approximation Techniques. <i>IEEE Transactions on Automatic Control</i> , 2010, 55, 1911-1916.	3.6	24
36	On real-time optimization of airborne wind energy generators. , 2013, , .		23

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37	Systems of Tethered Multicopters: Modeling and Control Design. IFAC-PapersOnLine, 2017, 50, 4610-4615.	0.5	23
38	Adaptive model predictive control for linear time varying MIMO systems. Automatica, 2019, 105, 237-245.	3.0	23
39	High-Altitude Wind Energy for Sustainable Marine Transportation. IEEE Transactions on Intelligent Transportation Systems, 2012, 13, 781-791.	4.7	21
40	Autonomous Takeoff and Flight of a Tethered Aircraft for Airborne Wind Energy. IEEE Transactions on Control Systems Technology, 2018, 26, 151-166.	3.2	21
41	Vehicle yaw control using a fast NMPC approach. , 2008, , .		20
42	Learning a Nonlinear Controller From Data: Theory, Computation, and Experimental Results. IEEE Transactions on Automatic Control, 2016, 61, 1854-1868.	3.6	20
43	Set Membership Identification of Linear Systems With Guaranteed Simulation Accuracy. IEEE Transactions on Automatic Control, 2020, 65, 5189-5204.	3.6	18
44	Shrinking horizon parametrized predictive control with application to energy-efficient train operation. Automatica, 2020, 112, 108635.	3.0	17
45	Adaptive model predictive control for constrained linear systems. , 2013, , .		17
46	A combined Moving Horizon and Direct Virtual Sensor approach for constrained nonlinear estimation. Automatica, 2013, 49, 193-199.	3.0	16
47	KiteGen project: control as key technology for a quantum leap in wind energy generators. Proceedings of the American Control Conference, 2007, , .	0.0	15
48	Automatic Retraction Phase of Airborne Wind Energy Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 5826-5831.	0.4	15
49	Autonomous Airborne Wind Energy Systems: Accomplishments and Challenges. Annual Review of Control, Robotics, and Autonomous Systems, 2022, 5, 603-631.	7.5	15
50	A study on the use of virtual sensors in vehicle control. , 2008, , .		14
51	Direct data-driven inverse control of a power kite for high altitude wind energy conversion. , 2011, , .		14
52	SMGO- $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si75.svg"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi mathvariant="normal"} \rangle \hat{I} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$: Balancing caution and reward in global optimization with black-box constraints. Information Sciences, 2022, 605, 15-42.	4.0	14
53	Simulation of stochastic systems via polynomial chaos expansions and convex optimization. Physical Review E, 2012, 86, 036702.	0.8	13
54	Control of a rigid wing pumping Airborne Wind Energy system in all operational phases. Control Engineering Practice, 2021, 111, 104794.	3.2	13

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55	Model Predictive Control with generalized terminal state constraint. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 299-304.	0.4	12
56	A DVS-MHE Approach to Vehicle Side-Slip Angle Estimation. IEEE Transactions on Control Systems Technology, 2014, 22, 2048-2055.	3.2	12
57	In-Flight Estimation of the Aerodynamics of Tethered Wings for Airborne Wind Energy. IEEE Transactions on Control Systems Technology, 2020, 28, 1309-1322.	3.2	12
58	SMGO: A set membership approach to data-driven global optimization. Automatica, 2021, 133, 109890.	3.0	12
59	A model predictive control approach to vehicle yaw control using identified models. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2012, 226, 577-590.	1.1	10
60	A Small-Scale Prototype to Study the Takeoff of Tethered Rigid Aircrafts for Airborne Wind Energy. IEEE/ASME Transactions on Mechatronics, 2017, 22, 1869-1880.	3.7	10
61	On the optimal worst-case experiment design for constrained linear systems. Automatica, 2014, 50, 3291-3298.	3.0	9
62	Learning multi-step prediction models for receding horizon control. , 2018, , .		9
63	Autonomous UAV Navigation in an Unknown Environment via Multi-Trajectory Model Predictive Control. , 2021, , .		9
64	Robust model predictive control via random convex programming. , 2011, , .		8
65	On modeling and control of the retraction phase for airborne wind energy systems. , 2014, , .		8
66	Automatic crosswind flight of tethered wings for airborne wind energy: a direct data-driven approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 4927-4932.	0.4	8
67	Robust multi-rate predictive control using multi-step prediction models learned from data. Automatica, 2022, 136, 109852.	3.0	8
68	On the use of approximated predictive control laws for nonlinear systems. , 2008, , .		7
69	On mixed-integer random convex programs. , 2012, , .		7
70	Set membership approximation of discontinuous nonlinear model predictive control laws. Automatica, 2012, 48, 191-197.	3.0	7
71	Design of Robust Predictive Control Laws Using Set Membership Identified Models. Asian Journal of Control, 2013, 15, 1714-1722.	1.9	7
72	A robust IMC approach for stability control of 4WS vehicles. , 2007, , .		6

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73	Scenario and Adaptive Model Predictive Control of Uncertain Systems. IFAC-PapersOnLine, 2015, 48, 352-359.	0.5	6
74	On the order reduction of the radiative heat transfer model for the simulation of plasma arcs in switchgear devices. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 169, 58-78.	1.1	6
75	Automatic Take-Off of a Tethered Aircraft for Airborne Wind Energy: Control Design and Experimental Results. IFAC-PapersOnLine, 2017, 50, 11932-11937.	0.5	6
76	Structured modelling from data and optimal control of the cooling system of a large business center. Journal of Building Engineering, 2020, 28, 101043.	1.6	6
77	Fast Nonlinear Model Predictive Control via Set Membership Approximation: An Overview. Lecture Notes in Control and Information Sciences, 2009, , 461-470.	0.6	6
78	On the design of linear virtual sensors for low cost vehicle stability control. , 2008, , .		5
79	Set membership approximations of predictive control laws: the tradeoff between accuracy and complexity. IET Control Theory and Applications, 2010, 4, 2907-2920.	1.2	5
80	Electricity in the Air: Tethered Wind Energy Systems. Mechanical Engineering, 2013, 135, S13-S21.	0.0	5
81	Day-Ahead Building Load Forecasting with a Small dataset. IFAC-PapersOnLine, 2020, 53, 13076-13081.	0.5	5
82	Fast implementation of predictive controllers using SM approximation methodologies. , 2007, , .		4
83	A direct Moving Horizon approach to vehicle side-slip angle estimation. , 2010, , .		4
84	Robust model predictive control: The random convex programming approach. , 2011, , .		4
85	Editorial To Tame the Wind: Advanced Control Applications in Wind Energy. IEEE Transactions on Control Systems Technology, 2013, 21, 1045-1048.	3.2	4
86	Active pitch control of tethered wings for airborne wind energy. , 2014, , .		4
87	Motor parameters estimation from industrial electrical measurements. , 2017, , .		4
88	Identification of Induction Motors Using Smart Circuit Breakers. IEEE Transactions on Control Systems Technology, 2019, 27, 2638-2646.	3.2	4
89	Day ahead electricity price forecast by NARX model with LASSO based features selection. , 2019, , .		4
90	On Modeling, Filtering and Automatic Control of Flexible Tethered Wings for Airborne Wind Energy. Green Energy and Technology, 2013, , 167-180.	0.4	4

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91	A hierarchical approach for balancing service provision by microgrids aggregators. IFAC-PapersOnLine, 2020, 53, 12930-12935.	0.5	4
92	On the use of Set Membership theory for global optimization of black-box functions. , 2020, , .		4
93	Set Membership approximation of discontinuous NMPC laws. , 2009, , .		3
94	Vehicle side-slip angle estimation using a direct MH estimator. , 2010, , .		3
95	Control of tethered airfoils for sustainable marine transportation. , 2010, , .		3
96	On the guaranteed accuracy of Polynomial Chaos Expansions. , 2011, , .		3
97	On the autonomous take-off and landing of tethered wings for airborne wind energy. , 2016, , .		3
98	Robust predictive control with data-based multi-step prediction models. , 2018, , .		3
99	Data-driven filtering for linear systems using Set Membership multistep predictors. , 2020, , .		3
100	A comparison between IMC and Sliding Mode approaches to vehicle yaw control. , 2008, , .		2
101	Vehicle lateral stability control via approximated NMPC: real-time implementation and software-in-the-loop test. , 2009, , .		2
102	On the Robustness of Receding Horizon Control using Nonlinear Approximated Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 226-231.	0.4	2
103	Optimization and control of a hybrid kite boat1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 14748-14753.	0.4	2
104	DFK control design for nonlinear systems. , 2012, , .		2
105	Model predictive control of stochastic LPV systems via Random Convex Programs. , 2012, , .		2
106	Adaptive model predictive control for constrained MIMO systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 39-44.	0.4	2
107	Experimental testing of an adaptive model predictive controller on a quad-tank system. , 2014, , .		2
108	Identification of the cooling system of a large business center. IFAC-PapersOnLine, 2018, 51, 174-179.	0.5	2

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109	Linear Take-Off and Landing of a Rigid Aircraft for Airborne Wind Energy Extraction. Green Energy and Technology, 2018, , 491-514.	0.4	2
110	Set membership estimation of day-ahead microgrids scheduling. , 2019, , .		2
111	Optimal Training of Echo State Networks via Scenario Optimization. IFAC-PapersOnLine, 2020, 53, 5183-5188.	0.5	2
112	Nonlinear Model Predictive Control using Set Membership Approximated Models. , 2010, , .		1
113	Robust design of predictive controllers using Set Membership identified models*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 13414-13419.	0.4	1
114	Sparse Set Membership identification of nonlinear functions and application to control of power kites for wind energy conversion. , 2011, , .		1
115	On-line direct control design for nonlinear systems. IFAC-PapersOnLine, 2015, 48, 144-149.	0.5	1
116	On the identification of linear time invariant systems with guaranteed simulation error bounds. , 2018, , .		1
117	Adaptive Model Predictive Control for Constrained Time Varying Systems. , 2018, , .		1
118	Efficient Train Operation via Shrinking Horizon Parametrized Predictive Control. IFAC-PapersOnLine, 2018, 51, 203-208.	0.5	1
119	An optimal reeling control strategy for pumping airborne wind energy systems without wind speed feedback. , 2021, , .		1
120	Improvement of Moving Horizon Estimators via Direct Virtual Sensor techniques. , 2011, , .		0
121	Vehicle stability control using direct virtual sensors. Vehicle System Dynamics, 2012, 50, 597-618.	2.2	0
122	Learning a nonlinear controller from data: Theory and computation. , 2014, , .		0
123	Worst-case experiment design for constrained MISO systems. , 2014, , .		0
124	Safeguarded optimal policy learning for a smart discrete manufacturing plant. IFAC-PapersOnLine, 2022, 55, 396-401.	0.5	0