Giancarlo Ferrari-Trecate

List of Publications by Citations

125 papers	4,587 citations	30 h-index	66 g-index
135 ext. papers	5,652 ext. citations	3.6 avg, IF	5.81 L-index

#	Paper	IF	Citations
125	Containment Control in Mobile Networks. *IEEE Transactions on Automatic Control*, **2008**, 53, 1972-1975	5.9	452
124	A clustering technique for the identification of piecewise affine systems. *Automatica*, **2003**, 39, 205-217	5.7	413
123	Observability and controllability of piecewise affine and hybrid systems. *IEEE Transactions on Automatic Control*, **2000**, 45, 1864-1876	5.9	392
122	Average consensus problems in networks of agents with delayed communications. *Automatica*, **2008**, 44, 1985-1995	5.7	278
121	Identification of Hybrid Systems A Tutorial. *European Journal of Control*, **2007**, 13, 242-260	2.5	254
120	Analysis of discrete-time piecewise affine and hybrid systems. *Automatica*, **2002**, 38, 2139-2146	5.7	179
119	Model Predictive Control Schemes for Consensus in Multi-Agent Systems with Single- and Double-Integrator Dynamics. *IEEE Transactions on Automatic Control*, **2009**, 54, 2560-2572	5.9	158
118	Review on Control of DC Microgrids and Multiple Microgrid Clusters. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2017**, 1-1	5.6	154
117	Moving horizon estimation for hybrid systems. *IEEE Transactions on Automatic Control*, **2002**, 47, 1663-1676	5.9	135
116	Plug-and-Play Voltage and Frequency Control of Islanded Microgrids With Meshed Topology. *IEEE Transactions on Smart Grid*, **2015**, 6, 1176-1184	10.7	124
115	Distributed Moving Horizon Estimation for Linear Constrained Systems. *IEEE Transactions on Automatic Control*, **2010**, 55, 2462-2475	5.9	121
114	Plug-and-Play Decentralized Model Predictive Control for Linear Systems. *IEEE Transactions on Automatic Control*, **2013**, 58, 2608-2614	5.9	113
113	Stability and stabilization of piecewise affine and hybrid systems: an LMI approach **2000**,		87
112	Modeling and control of co-generation power plants: a hybrid system approach. *IEEE Transactions on Control Systems Technology*, **2004**, 12, 694-705	4.8	80
111	A Decentralized Scalable Approach to Voltage Control of DC Islanded Microgrids. *IEEE Transactions on Control Systems Technology*, **2016**, 24, 1965-1979	4.8	78
110	Moving-horizon partition-based state estimation of large-scale systems. *Automatica*, **2010**, 46, 910-918	5.7	76
109	Containment and Consensus-Based Distributed Coordination Control to Achieve Bounded Voltage and Precise Reactive Power Sharing in Islanded AC Microgrids. *IEEE Transactions on Industry Applications*, **2017**, 53, 5187-5199	4.3	65

108	Analysis of coordination in multi-agent systems through partial difference equations. *IEEE Transactions on Automatic Control*, **2006**, 51, 1058-1063	5.9	65
107	Laplacian Sheep: A Hybrid, Stop-Go Policy for Leader-Based Containment Control. *Lecture Notes in Computer Science*, **2006**, 212-226	0.9	60
106	Comparison of Four Procedures for the Identification of Hybrid Systems. *Lecture Notes in Computer Science*, **2005**, 354-369	0.9	58
105	Plug-and-play model predictive control based on robust control invariant sets. *Automatica*, **2014**, 50, 2179-2186	5.7	56
104	Stable current sharing and voltage balancing in DC microgrids: A consensus-based secondary control layer. *Automatica*, **2018**, 95, 1-13	5.7	55
103	Tube-based distributed control of linear constrained systems. *Automatica*, **2012**, 48, 2860-2865	5.7	52
102	What Population Reveals about Individual Cell Identity: Single-Cell Parameter Estimation of Models of Gene Expression in Yeast. *PLoS Computational Biology*, **2016**, 12, e1004706	5	50
101	Plug-and-Play Fault Detection and Control-Reconfiguration for a Class of Nonlinear Large-Scale Constrained Systems. *IEEE Transactions on Automatic Control*, **2016**, 61, 3963-3978	5.9	47
100	Distributed moving horizon estimation for nonlinear constrained systems. *International Journal of Robust and Nonlinear Control*, **2012**, 22, 123-143	3.6	43
99	Line-Independent Plug-and-Play Controllers for Voltage Stabilization in DC Microgrids. *IEEE Transactions on Control Systems Technology*, **2018**, 26, 1115-1123	4.8	40
98	Data-based hybrid modelling of the component placement process in pick-and-place machines. *Control Engineering Practice*, **2004**, 12, 1241-1252	3.9	38
97	. *IEEE Transactions on Power Systems*, **2019**, 34, 1780-1800	7	37
96	. *IEEE Transactions on Automatic Control*, **2020**, 65, 3800-3815	5.9	35
95	Structural identification of piecewise-linear models of genetic regulatory networks. *Journal of Computational Biology*, **2008**, 15, 1365-80	1.7	30
94	The Switching Threshold Reconstruction Problem for Piecewise-Affine Models of Genetic Regulatory Networks. *IEEE Transactions on Automatic Control*, **2008**, 53, 153-165	5.9	30
93	Plug and play distributed model predictive control based on distributed invariance and optimization **2013**,		26
92	. *IEEE Transactions on Automatic Control*, **2019**, 64, 4-19	5.9	25
91	Identification of genetic network dynamics with unate structure. *Bioinformatics*, **2010**, 26, 1239-45	7.2	24

90	Reconstruction of Switching Thresholds in Piecewise-Affine Models of Genetic Regulatory Networks. *Lecture Notes in Computer Science*, **2006**, 184-199	0.9	24
89	A passivity-based approach to voltage stabilization in DC microgrids with ZIP loads. *Automatica*, **2020**, 113, 108770	5.7	23
88	Stabilizing plug-and-play regulators and secondary coordinated control for AC islanded microgrids with bus-connected topology. *Applied Energy*, **2018**, 210, 914-924	10.7	22
87	Anwendung von modellbasierter prädiktiver Regelung und Methoden der hybriden Systeme zur optimalen Produktionsplanung (Using Model Predictive Control and Hybrid Systems for Optimal Scheduling of Industrial Processes). *Automatisierungstechnik*, **2003**, 51, 285-294	0.8	21
86	Regularization networks: fast weight calculation via Kalman filtering. *IEEE Transactions on Neural Networks*, **2001**, 12, 228-35		21
85	Distributed Fault Detection for Interconnected Large-Scale Systems: A Scalable Plug & Play Approach. *IEEE Transactions on Control of Network Systems*, **2019**, 6, 800-811	4	21
84	Zeros of Continuous-time Linear Periodic Systems. *Automatica*, **1998**, 34, 1651-1655	5.7	19
83	Consistent identification of NARX models via regularization networks. *IEEE Transactions on Automatic Control*, **1999**, 44, 2045-2049	5.9	19
82	A hybrid model predictive control scheme for containment and distributed sensing in multi-agent systems. *Systems and Control Letters*, **2013**, 62, 413-419	2.4	18
81	Distributed watermarking for secure control of microgrids under replay attacks. *IFAC-PapersOnLine*, **2018**, 51, 182-187	0.7	18
80	Moving horizon estimation for distributed nonlinear systems with application to cascade river reaches. *Journal of Process Control*, **2011**, 21, 767-774	3.9	16
79	Regularization networks for inverse problems: A state-space approach. *Automatica*, **2003**, 39, 669-676	5.7	16
78	A Clustering Technique for the Identification of Piecewise Affine systems. *Lecture Notes in Computer Science*, **2001**, 218-231	0.9	15
77	A New Learning Method for Piecewise Linear Regression. *Lecture Notes in Computer Science*, **2002**, 444-449	0.9	15
76	Stability Analysis of Discrete-Time Switched Systems Through Lyapunov Functions with Nonminimal State. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2003**, 36, 325-329		14
75	Fast spline smoothing via spectral factorization concepts. *Automatica*, **2000**, 36, 1733-1739	5.7	14
74	Plug-and-play distributed model predictive control with coupling attenuation. *Optimal Control Applications and Methods*, **2015**, 36, 292-305	1.7	13
73	Model Predictive Controllers for Reduction of Mechanical Fatigue in Wind Farms. *IEEE Transactions on Control Systems Technology*, **2017**, 25, 535-549	4.8	12

72	Plug-and-play state estimation and application to distributed output-feedback model predictive control. *European Journal of Control*, **2015**, 25, 17-26	2.5	12
71	A distributed attack detection method for multi-agent systems governed by consensus-based control **2017**,		12
70	Voltage control of DC islanded microgrids: a decentralized scalable approach **2015**,		12
69	Fault Diagnosis and control-reconfiguration in Large-Scale Systems: a Plug-and-Play approach **2014**,		12
68	Subtilin Production by Bacillus Subtilis: Stochastic Hybrid Models and Parameter Identification. *IEEE Transactions on Automatic Control*, **2008**, 53, 38-50	5.9	12
67	Plug-and-play distributed state estimation for linear systems **2013**,		11
66	Plug-and-Play decentralized Model Predictive Control **2012**,		10
65	A model predictive control scheme for consensus in multi-agent systems with single-integrator dynamics and input constraints **2007**,		10
64	Plug-and-play control of AC islanded microgrids with general topology **2016**,		10
63	Approximate Kron Reduction Methods for Electrical Networks With Applications to Plug-and-Play Control of AC Islanded Microgrids. *IEEE Transactions on Control Systems Technology*, **2019**, 27, 2403-2416	4.8	10
62	A general framework for the identification of jump Markov linear systems **2007**,		9
61	Modeling and Control of Co-generation Power Plants: A Hybrid System Approach. *Lecture Notes in Computer Science*, **2002**, 209-224	0.9	9
60	A scalable, line-independent control design algorithm for voltage and frequency stabilization in AC islanded microgrids. *Automatica*, **2020**, 111, 108577	5.7	9
59	Voltage Stabilization in MVDC Microgrids Using Passivity-Based Nonlinear Control **2018**,		9
58	ANALYSIS OF COORDINATION IN MULTI-AGENT SYSTEMS THROUGH PARTIAL DIFFERENCE EQUATIONS. PART II: NONLINEAR CONTROL. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 209-214		8
57	Control schemes based on the wave equation for consensus in multi-agent systems with double-integrator dynamics **2007**,		7
56	Single-Linkage Clustering for Optimal Classification in Piecewise Affine Regression. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2003**, 36, 33-38		7
55	Fuzzy systems with overlapping Gaussian concepts: Approximation properties in Sobolev norms. *Fuzzy Sets and Systems*, **2002**, 130, 137-145	3.7	7

54	ANALYSIS OF COORDINATION IN MULTI-AGENT SYSTEMS THROUGH PARTIAL DIFFERENCE EQUATIONS. PART I: THE LAPLACIAN CONTROL. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 203-208		7
53	Hierarchical Control in Islanded DC Microgrids With Flexible Structures. *IEEE Transactions on Control Systems Technology*, **2020**, 1-14	4.8	7
52	Scalable monitoring of interconnected stochastic systems **2016**,		7
51	Voltage and frequency control in AC islanded microgrids: a scalable, line-independent design algorithm. *IFAC-PapersOnLine*, **2017**, 50, 13922-13927	0.7	6
50	A moving horizon scheme for distributed state estimation **2009**,		6
49	On the zeros of discrete-time linear periodic systems. *Circuits, Systems, and Signal Processing*, **1997**, 16, 703-718	2.2	6
48	Supervised model predictive control of large-scale electricity networks via clustering methods. *Optimal Control Applications and Methods*,	1.7	6
47	Voltage stabilization in DC microGrids through coupling-independent Plug-and-Play controllers **2016**,		6
46	Plug-and-play control and consensus algorithms for current sharing in DC microgrids. *IFAC-PapersOnLine*, **2017**, 50, 12440-12445	0.7	5
45	Voltage and frequency control of islanded microgrids: A plug-and-play approach **2014**,		5
44	Observability analysis and state observers for automotive powertrains with backlash: a hybrid system approach. *International Journal of Control*, **2006**, 79, 496-507	1.5	5
43	Stochastic Fault Detection in a Plug-and-Play Scenario **2015**,		4
42	A Plug-and-Play Fault Diagnosis Approach for Large-Scale Systems. *IFAC-PapersOnLine*, **2015**, 48, 601-606	0.7	4
41	Distributed bounded-error state estimation based on practical robust positive invariance. *International Journal of Control*, **2015**, 88, 2277-2290	1.5	4
40	Identification of biological models from single-cell data: A comparison between mixed-effects and moment-based inference **2013**,		4
39	Parameter identification for stochastic hybrid models of biological interaction networks **2007**,		4
38	Conditions of Optimal Classification for Piecewise Affine Regression. *Lecture Notes in Computer Science*, **2003**, 188-202	0.9	4
37	Lagrange stability and performance analysis of discrete-time piecewise affine systems with logic states. *International Journal of Control*, **2003**, 76, 1585-1598	1.5	4

36	On the Wold decomposition of discrete-time cyclostationary processes. *IEEE Transactions on Signal Processing*, **1999**, 47, 2041-2043	4.8	4
35	Switch Detection in Genetic Regulatory Networks **2007**, 754-757		4
34	Design of plug-and-play model predictive control: An approach based on linear programming **2013**,		3
33	Canalizing structure of genetic network dynamics: modelling and identification via mixed-integer programming **2009**,		3
32	Sliding mode control for coordination in multi-agent systems with directed communication graphs **2007**,		3
31	MODELLING AND CONTROL OF CO-GENERATION POWER PLANTS UNDER CONSIDERATION OF LIFETIME CONSUMPTION: A HYBRID SYSTEM APPROACH. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2002**, 35, 275-280		3
30	Sobolev approximation by means of fuzzy systems with overlapping Gaussian concepts **1999**,		3
29	Analysis of Discrete-Time PWA Systems with Logic States. *Lecture Notes in Computer Science*, **2002**, 194-208		3
28	On Existence of Equilibria, Voltage Balancing, and Current Sharing in Consensus-Based DC Microgrids **2020**,		3
27	A Supervisory Control Structure for Voltage-Controlled Islanded DC Microgrids **2019**,		3
26	Structural identification of unate-like genetic network models from time-lapse protein concentration measurements **2010**,		2
25	Distributed moving horizon estimation for nonlinear constrained systems. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 909-914		2
24	Partitioning datasets based on equalities among parameters. *Automatica*, **2010**, 46, 460-465	5.7	2
23	Hybrid identification methods for the reconstruction of Genetic Regulatory Networks **2007**,		2
22	Consensusability of linear interconnected multi-agent systems. *IFAC-PapersOnLine*, **2020**, 53, 2915-2920	0.7	2
21	Distributed bounded-error state estimation for partitioned systems based on practical robust positive invariance **2013**,		2
20	Identification of AC Distribution Networks With Recursive Least Squares and Optimal Design of Experiment. *IEEE Transactions on Control Systems Technology*, **2021**, 1-8	4.8	2
19	Validation methods for population models of gene expression dynamics. *IFAC-PapersOnLine*, **2016**, 49, 114-119	0.7	2

18	Plug-and-Play Voltage/Current Stabilization DC Microgrid Clusters with Grid-Forming/Feeding Converters **2018**,		2
17	On Consensusability of Linear Interconnected Multi-Agent Systems and Simultaneous Stabilization. *IEEE Transactions on Control of Network Systems*, **2021**, 1-1	4	2
16	Plug-and-play decentralized frequency regulation for power networks with FACTS devices **2014**,		1
15	Invalidation of the structure of genetic network dynamics: a geometric approach. *International Journal of Robust and Nonlinear Control*, **2012**, 22, 1140-1156	3.6	1
14	Learning the structure of genetic network dynamics: A geometric approach. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2011**, 44, 11654-11659		1
13	Identification of parameters and structure of piecewise affine models of genetic networks. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 587-592		1
12	Identification of PieceWise Affine Models of Genetic Regulatory Networks: the Data Classification Problem. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 307-312		1
11	Contractive distributed MPC for consensus in networks of single- and double-integrators. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 9033-9038		1
10	Consistent Sobolev regression via fuzzy systems with overlapping concepts. *Fuzzy Sets and Systems*, **2006**, 157, 1075-1091	3.7	1
9	A Unified Passivity-Based Framework for Control of Modular Islanded AC Microgrids. *IEEE Transactions on Control Systems Technology*, **2021**, 1-17	4.8	1
8	Consensus-Based Current Sharing and Voltage Balancing in DC Microgrids With Exponential Loads. *IEEE Transactions on Control Systems Technology*, **2021**, 1-13	4.8	1
7	A Learning Algorithm for Piecewise Linear Regression. *Perspectives in Neural Computing*, **2002**, 114-119		1
6	Data-Driven Unknown-Input Observers and State Estimation **2022**, 6, 1424-1429		1
5	A Behavioral Input-Output Parametrization of Control Policies with Suboptimality Guarantees **2021** ,		1
4	Suboptimal Distributed LQR Design for Physically Coupled Systems. *IFAC-PapersOnLine*, **2020**, 53, 11032-11037	0.7	0
3	Call for Papers: Special Issue on System Identification for Biological Systems *International Journal of Robust and Nonlinear Control*, **2010**, 20, 842-842	3.6	
2	Optimal Control for Real-Time Feedback Rate-Monotonic Schedulers. *Lecture Notes in Computer Science*, **2005**, 894-903	0.9	
1	Scalable MPC Design. *Control Engineering*, **2019**, 259-283	1	