

Paolo Frasca

List of Publications by Year in descending order

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Version: 2024-02-01

100
papers

2,263
citations

304602

22
h-index

243529

44
g-index

103
all docs

103
docs citations

103
times ranked

1474
citing authors

#	ARTICLE	IF	CITATIONS
1	Discontinuities and hysteresis in quantized average consensus. <i>Automatica</i> , 2011, 47, 1916-1928.	3.0	254
2	Average consensus on networks with quantized communication. <i>International Journal of Robust and Nonlinear Control</i> , 2009, 19, 1787-1816.	2.1	199
3	Gossip consensus algorithms via quantized communication. <i>Automatica</i> , 2010, 46, 70-80.	3.0	192
4	Discrete Partitioning and Coverage Control for Gossiping Robots. <i>IEEE Transactions on Robotics</i> , 2012, 28, 364-378.	7.3	125
5	Robust Self-Triggered Coordination With Ternary Controllers. <i>IEEE Transactions on Automatic Control</i> , 2013, 58, 3024-3038.	3.6	109
6	Ergodic Randomized Algorithms and Dynamics Over Networks. <i>IEEE Transactions on Control of Network Systems</i> , 2015, 2, 78-87.	2.4	86
7	On robust synchronization of heterogeneous linear multi-agent systems with static couplings. <i>Automatica</i> , 2015, 53, 392-399.	3.0	77
8	Gossip Coverage Control for Robotic Networks: Dynamical Systems on the Space of Partitions. <i>SIAM Journal on Control and Optimization</i> , 2012, 50, 419-447.	1.1	67
9	On the mathematical theory of vehicular traffic flow II: Discrete velocity kinetic models. <i>International Journal of Non-Linear Mechanics</i> , 2007, 42, 411-421.	1.4	63
10	Continuous-time quantized consensus: Convergence of Krasovskii solutions. <i>Systems and Control Letters</i> , 2012, 61, 273-278.	1.3	57
11	Gossips and Prejudices: Ergodic Randomized Dynamics in Social Networks. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2013, 46, 212-219.	0.4	56
12	Continuous and discontinuous opinion dynamics with bounded confidence. <i>Nonlinear Analysis: Real World Applications</i> , 2012, 13, 1239-1251.	0.9	50
13	Traffic Flow on a Ring With a Single Autonomous Vehicle: An Interconnected Stability Perspective. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2021, 22, 4998-5008.	4.7	47
14	Average consensus on networks with transmission noise or quantization. , 2007, , .		43
15	Message Passing Optimization of Harmonic Influence Centrality. <i>IEEE Transactions on Control of Network Systems</i> , 2014, 1, 109-120.	2.4	41
16	Adaptive synchronization of unknown heterogeneous agents: An adaptive virtual model reference approach. <i>Journal of the Franklin Institute</i> , 2019, 356, 935-955.	1.9	40
17	Distributed randomized algorithms for opinion formation, centrality computation and power systems estimation: A tutorial overview. <i>European Journal of Control</i> , 2015, 24, 2-13.	1.6	37
18	Effects of anisotropic interactions on the structure of animal groups. <i>Journal of Mathematical Biology</i> , 2011, 62, 569-588.	0.8	36

#	ARTICLE	IF	CITATIONS
19	Average consensus by gossip algorithms with quantized communication. , 2008, , .		33
20	Output Synchronization of Unknown Heterogeneous Agents via Distributed Model Reference Adaptation. IEEE Transactions on Control of Network Systems, 2019, 6, 515-525.	2.4	32
21	Existence and approximation of probability measure solutions to models of collective behaviors. Networks and Heterogeneous Media, 2011, 6, 561-596.	0.5	27
22	Hybrid models of opinion dynamics with opinion-dependent connectivity. Automatica, 2019, 100, 153-161.	3.0	25
23	Leaderless Synchronization of Heterogeneous Oscillators by Adaptively Learning the Group Model. IEEE Transactions on Automatic Control, 2020, 65, 412-418.	3.6	24
24	Cooperative adaptive cruise control over unreliable networks: an observer-based approach to increase robustness to packet loss. , 2018, , .		23
25	Introduction to Averaging Dynamics over Networks. Lecture Notes in Control and Information Sciences, 2018, , .	0.6	22
26	Cyclic Communication in Adaptive Strategies to Platooning: The Case of Synchronized Merging. IEEE Transactions on Intelligent Vehicles, 2021, 6, 490-500.	9.4	21
27	Stability of Open Multiagent Systems and Applications to Dynamic Consensus. IEEE Transactions on Automatic Control, 2021, 66, 2326-2331.	3.6	20
28	Distributed averaging on digital erasure networks. Automatica, 2011, 47, 115-121.	3.0	19
29	Optimal One-Dimensional Coverage by Unreliable Sensors. SIAM Journal on Control and Optimization, 2015, 53, 3120-3140.	1.1	19
30	A probabilistic analysis of the average consensus algorithm with quantized communication. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 8062-8067.	0.4	17
31	The Observability Radius of Networks. IEEE Transactions on Automatic Control, 2017, 62, 3006-3013.	3.6	16
32	Proportional Dynamic Consensus in Open Multi-Agent Systems. , 2018, , .		16
33	Graphon-Based Sensitivity Analysis of SIS Epidemics. , 2020, 4, 542-547.		16
34	Broadcast Gossip Averaging: Interference and Unbiasedness in Large Abelian Cayley Networks. IEEE Journal on Selected Topics in Signal Processing, 2011, 5, 866-875.	7.3	15
35	Centroidal Area-Constrained Partitioning for Robotic Networks. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2014, 136, .	0.9	14
36	Almost sure convergence of a randomized algorithm for relative localization in sensor networks. , 2013, , .		12

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37	A distributed randomized algorithm for relative localization in sensor networks. , 2013, , .		12
38	Consensus and Disagreement: The Role of Quantized Behaviors in Opinion Dynamics. SIAM Journal on Control and Optimization, 2018, 56, 1058-1080.	1.1	12
39	On the mean square error of randomized averaging algorithms. Automatica, 2013, 49, 2496-2501.	3.0	11
40	Dynamic Partitioning and Coverage Control With Asynchronous One-to-Base-Station Communication. IEEE Transactions on Control of Network Systems, 2016, 3, 24-33.	2.4	11
41	Distributed Estimation From Relative and Absolute Measurements. IEEE Transactions on Automatic Control, 2017, 62, 6385-6391.	3.6	11
42	Large-Scale Network Reduction Towards Scale-Free Structure. IEEE Transactions on Network Science and Engineering, 2019, 6, 711-723.	4.1	11
43	Functional Target Controllability of Networks: Structural Properties and Efficient Algorithms. IEEE Transactions on Network Science and Engineering, 2020, 7, 1521-1530.	4.1	11
44	Mitigating COVID-19 outbreaks in workplaces and schools by hybrid telecommuting. PLoS Computational Biology, 2021, 17, e1009264.	1.5	11
45	Multiagent coverage algorithms with gossip communication: Control systems on the space of partitions. , 2009, , .		10
46	Transient and limit performance of distributed relative localization. , 2012, , .		10
47	Self-triggered rendezvous of gossiping second-order agents. , 2013, , .		10
48	Platooning merging maneuvers in the presence of parametric uncertainty. IFAC-PapersOnLine, 2018, 51, 148-153.	0.5	10
49	Achieving Robust Average Consensus Over Lossy Wireless Networks. IEEE Transactions on Control of Network Systems, 2019, 6, 127-137.	2.4	10
50	On the Influence of Noise in Randomized Consensus Algorithms. , 2021, 5, 1025-1030.		10
51	Opinion Dynamics With Topological Gossiping: Asynchronous Updates Under Limited Attention. , 2020, 4, 566-571.		9
52	The Closed Loop Between Opinion Formation and Personalized Recommendations. IEEE Transactions on Control of Network Systems, 2022, 9, 1092-1103.	2.4	9
53	Stochastic String Stability of Vehicle Platoons via Cooperative Adaptive Cruise Control With Lossy Communication. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 10912-10922.	4.7	9
54	Discrete Partitioning and Coverage Control With Gossip Communication. , 2009, , .		8

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55	Self-triggered coordination with ternary controllers*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 43-48.	0.4	7
56	Continuous-time consensus dynamics with quantized all-to-all communication. , 2015, , .		7
57	Distributed Estimation From Relative Measurements of Heterogeneous and Uncertain Quality. IEEE Transactions on Signal and Information Processing Over Networks, 2019, 5, 203-217.	1.6	6
58	On a weaker notion of ring stability for mixed traffic with human-driven and autonomous vehicles. , 2019, , .		6
59	Large network consensus is robust to packet losses and interferences. , 2013, , .		6
60	A Continuation Method for Large-Scale Modeling and Control: From ODEs to PDE, a Round Trip. IEEE Transactions on Automatic Control, 2022, 67, 5118-5133.	3.6	6
61	Limited benefit of cooperation in distributed relative localization. , 2013, , .		5
62	Modeling birds on wires. Journal of Theoretical Biology, 2017, 415, 102-112.	0.8	5
63	Asynchronous opinion dynamics on the k -nearest-neighbors graph. , 2018, , .		5
64	The Laplacian Spectrum of Large Graphs Sampled From Graphons. IEEE Transactions on Network Science and Engineering, 2021, 8, 1711-1721.	4.1	5
65	Generalized Solutions to Opinion Dynamics Models with Discontinuities. Modeling and Simulation in Science, Engineering and Technology, 2021, , 11-47.	0.4	5
66	The quantization error in the average consensus problem. , 2008, , .		4
67	Average consensus on digital noisy networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 36-41.	0.4	4
68	Continuous-time Discontinuous Equations in Bounded Confidence Opinion Dynamics. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 1986-1990.	0.4	4
69	The observability radius of network systems. , 2016, , .		4
70	Adaptive state-feedback synchronization with distributed input: the cyclic case. IFAC-PapersOnLine, 2018, 51, 1-6.	0.5	4
71	On the Convergence of Message Passing Computation of Harmonic Influence in Social Networks. IEEE Transactions on Network Science and Engineering, 2019, 6, 116-129.	4.1	4
72	Quantized average consensus: Discontinuities and hysteresis. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 78-83.	0.4	3

#	ARTICLE	IF	CITATIONS
73	Average Resistance of Toroidal Graphs. SIAM Journal on Control and Optimization, 2015, 53, 2541-2557.	1.1	3
74	Achieving robust average consensus over wireless networks. , 2016, , .		3
75	MergeToCure: a New Strategy to Allocate Cure in an Epidemic over a Grid-like network Using a Scale-Free Abstraction. IFAC-PapersOnLine, 2018, 51, 34-39.	0.5	3
76	Dynamic partitioning and coverage control with asynchronous one-to-base-station communication. , 2011, , .		2
77	An index for the "local" influence in social networks. , 2016, , .		2
78	Using a linear gain to accelerate average consensus over unreliable networks. , 2017, , .		2
79	Boundary Control for Output Regulation in Scale-Free Positive Networks. , 2019, , .		2
80	Subgraph Detection for Average Detectability of LTI Systems. IEEE Transactions on Network Science and Engineering, 2020, 7, 2787-2798.	4.1	2
81	Control of Average and Deviation in Large-Scale Linear Networks. IEEE Transactions on Automatic Control, 2022, 67, 1639-1654.	3.6	2
82	Boundary Control for Stabilization of Large-Scale Networks through the Continuation Method. , 2021, , .		2
83	Random coordinate descent algorithm for open multi-agent systems with complete topology and homogeneous agents. , 2021, , .		2
84	Detection of Gaussian signals via hexagonal sensor networks. International Journal of Mathematical Modelling and Numerical Optimisation, 2009, 1, 39.	0.1	1
85	The asymptotical error of broadcast gossip averaging algorithms. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 10027-10031.	0.4	1
86	A message passing algorithm for the evaluation of social influence. , 2014, , .		1
87	Optimal event handling by multiple unmanned aerial vehicles. , 2016, , .		1
88	A Hybrid Model of Opinion Dynamics with Limited Confidence. IFAC-PapersOnLine, 2016, 49, 351-355.	0.5	1
89	Mean-field analysis of the convergence time of message-passing computation of harmonic influence in social networks. IFAC-PapersOnLine, 2017, 50, 2409-2414.	0.5	1
90	Averaging with Exogenous Inputs and Electrical Networks. Lecture Notes in Control and Information Sciences, 2018, , 109-131.	0.6	1

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91	Protecting shared information in networks: A network security game with strategic attacks. International Journal of Robust and Nonlinear Control, 2020, 30, 4255-4277.	2.1	1
92	Centroidal Area-Constrained Partitioning for Robotic Networks. , 2013, , .		1
93	Shape-Based Nonlinear Model Reduction for 1D Conservation Laws. IFAC-PapersOnLine, 2020, 53, 5309-5314.	0.5	1
94	Distributed averaging on digital noisy networks. , 2011, , .		0
95	On Optimal Coverage with Unreliable Sensors*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 38-42.	0.4	0
96	Technical Committee on Networks and Communication Systems [Technical Activities]. IEEE Control Systems, 2016, 36, 13-15.	1.0	0
97	Technical Committee on Networks and Communication Systems [Technical Activities]. IEEE Control Systems, 2018, 38, 18-19.	1.0	0
98	Performance and Robustness of Averaging Algorithms. Lecture Notes in Control and Information Sciences, 2018, , 93-108.	0.6	0
99	Averaging in Time-Varying Networks. Lecture Notes in Control and Information Sciences, 2018, , 69-92.	0.6	0
100	Averaging in Time-Invariant Networks. Lecture Notes in Control and Information Sciences, 2018, , 31-67.	0.6	0