

# Kai Cai

## List of Publications by Year in descending order

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87  
papers

1,604  
citations

471061

17  
h-index

360668

35  
g-index

90  
all docs

90  
docs citations

90  
times ranked

789  
citing authors

#	ARTICLE	IF	CITATIONS
1	Average consensus on general strongly connected digraphs. Automatica, 2012, 48, 2750-2761.	3.0	194
2	Supervisory Control of Timed Discrete-Event Systems. Communications and Control Engineering, 2019, , 411-444.	1.0	165
3	Supervisory Control of Discrete-Event Systems. Communications and Control Engineering, 2019, , .	1.0	113
4	Quantized Consensus and Averaging on Gossip Digraphs. IEEE Transactions on Automatic Control, 2011, 56, 2087-2100.	3.6	98
5	Supervisor Localization: A Top-Down Approach to Distributed Control of Discrete-Event Systems. IEEE Transactions on Automatic Control, 2010, 55, 605-618.	3.6	93
6	A Distributed Algorithm for Resource Allocation Over Dynamic Digraphs. IEEE Transactions on Signal Processing, 2017, 65, 2600-2612.	3.2	86
7	Relative Observability of Discrete-Event Systems and Its Supremal Sublanguages. IEEE Transactions on Automatic Control, 2015, 60, 659-670.	3.6	76
8	Average Consensus on Arbitrary Strongly Connected Digraphs With Time-Varying Topologies. IEEE Transactions on Automatic Control, 2014, 59, 1066-1071.	3.6	65
9	Supervisory Control of Discrete-Event Systems. , 2021, , 2245-2253.		56
10	Supervisory control of discrete-event systems: A brief history. Annual Reviews in Control, 2018, 45, 250-256.	4.4	52
11	Distributed Dual Gradient Tracking for Resource Allocation in Unbalanced Networks. IEEE Transactions on Signal Processing, 2020, 68, 2186-2198.	3.2	44
12	Distributed supervisory control of discrete-event systems with communication delay. Discrete Event Dynamic Systems: Theory and Applications, 2016, 26, 263-293.	0.6	32
13	Supervisor localization for large discrete-event systems. International Journal of Advanced Manufacturing Technology, 2010, 50, 1189-1202.	1.5	31
14	A structural approach to the non-blocking supervisory control of discrete-event systems. International Journal of Advanced Manufacturing Technology, 2009, 41, 1152-1168.	1.5	29
15	Supervisory Control of Discrete-Event Systems: A Brief History “ 1980-2015. IFAC-PapersOnLine, 2017, 50, 1791-1797.	0.5	29
16	Application of online supervisory control of discrete-event systems to multi-robot warehouse automation. Control Engineering Practice, 2018, 81, 97-104.	3.2	26
17	On scalable supervisory control of multi-agent discrete-event systems. Automatica, 2019, 108, 108460.	3.0	26
18	Supervision localization of timed discrete-event systems. Automatica, 2013, 49, 2786-2794.	3.0	21

#	ARTICLE	IF	CITATIONS
19	Average consensus on general digraphs. , 2011, , .		19
20	New results on supervisor localization, with case studies. Discrete Event Dynamic Systems: Theory and Applications, 2015, 25, 203-226.	0.6	18
21	Real-time estimation of the optically detected magnetic resonance shift in diamond quantum thermometry toward biological applications. Physical Review Research, 2020, 2, .	1.3	18
22	Convergence time analysis of quantized gossip consensus on digraphs. Automatica, 2012, 48, 2344-2351.	3.0	16
23	Relative Observability and Coobservability of Timed Discrete-Event Systems. IEEE Transactions on Automatic Control, 2016, 61, 3382-3395.	3.6	14
24	Supervisor Localization. Lecture Notes in Control and Information Sciences, 2016, , .	0.6	14
25	Supervisor localization of discrete-event systems under partial observation. Automatica, 2017, 81, 142-147.	3.0	13
26	Optimal Secret Protections in Discrete-Event Systems. IEEE Transactions on Automatic Control, 2022, 67, 2816-2828.	3.6	13
27	Gossip consensus and averaging algorithms with quantization. , 2010, , .		11
28	On Resilient Supervisory Control Against Indefinite Actuator Attacks in Discrete-Event Systems. , 2022, 6, 2942-2947.		11
29	Top-Down Synthesis of Multiagent Formation Control: An Eigenstructure Assignment Based Approach. IEEE Transactions on Control of Network Systems, 2019, 6, 1404-1414.	2.4	10
30	Warehouse automation by logistic robotic networks: a cyber-physical control approach. Frontiers of Information Technology and Electronic Engineering, 2020, 21, 693-704.	1.5	10
31	On relative observability of discrete-event systems. , 2013, , .		9
32	Distributed output regulation of heterogeneous uncertain linear agents. Automatica, 2020, 119, 109094.	3.0	9
33	Average consensus on arbitrary strongly connected digraphs with dynamic topologies. , 2012, , .		8
34	On relative coobservability of discrete-event systems. , 2015, , .		8
35	Multi-Objective Optimal Charging Control of Plug-In Hybrid Electric Vehicles in Power Distribution Systems. Energies, 2019, 12, 2563.	1.6	8
36	Supervisor Localization of Discrete-Event Systems Based on State Tree Structures. IEEE Transactions on Automatic Control, 2014, 59, 1329-1335.	3.6	7

#	ARTICLE	IF	CITATIONS
37	Delay-robustness in distributed control of timed discrete-event systems based on supervisor localisation. International Journal of Control, 2016, 89, 2055-2072.	1.2	7
38	Fast centralized integer resource allocation algorithm and its distributed extension over digraphs. Neurocomputing, 2017, 270, 91-100.	3.5	7
39	Top-down synthesis of multi-agent formation control: An eigenstructure assignment based approach. , 2017, , .		7
40	Decentralized Opacity Enforcement in Discrete Event Systems Using Supervisory Control. , 2018, , .		7
41	Tight bound on parameter of surplus-based averaging algorithm over balanced digraphs. International Journal of Control, 2020, 93, 1859-1866.	1.2	7
42	Supervisor Localization: A Top-Down Approach to Distributed Control of Discrete-Event Systems. , 2009, , .		6
43	Convergence time analysis of quantized gossip algorithms on digraphs. , 2010, , .		6
44	Averaging Over General Random Networks. IEEE Transactions on Automatic Control, 2012, 57, 3186-3191.	3.6	6
45	On supervisor localization based distributed control of discrete-event systems under partial observation. , 2016, , .		6
46	On algebraic connectivity of directed scale-free networks. Journal of the Franklin Institute, 2018, 355, 8065-8078.	1.9	6
47	Distributed algorithm for a finite time horizon resource allocation over a directed network. IET Control Theory and Applications, 2020, 14, 1170-1182.	1.2	6
48	Delay-robustness in distributed control of timed discrete-event systems based on supervisor localization. , 2014, , .		5
49	A new algorithm for computing the supremal relatively observable sublanguage. , 2016, , .		5
50	Parameter optimization of motion artifact canceling PPG-based heart rate sensor by means of cross validation. , 2017, , .		5
51	A fully distributed approach to resource allocation problem under directed and switching topologies. , 2015, , .		4
52	Characterizations and effective computation of supremal relatively observable sublanguages. Discrete Event Dynamic Systems: Theory and Applications, 2018, 28, 269-287.	0.6	4
53	On Scalable Supervisory Control of Multi-Agent Discrete-Event Systems. IFAC-PapersOnLine, 2018, 51, 25-30.	0.5	4
54	Supervisor Localization of Discrete-Event Systems with Infinite Behavior. IFAC-PapersOnLine, 2018, 51, 361-366.	0.5	4

#	ARTICLE	IF	CITATIONS
55	Secret Securing with Multiple Protections and Minimum Costs. , 2019, , .		4
56	Supervisor localisation for large-scale discrete-event systems under partial observation. International Journal of Control, 2020, 93, 387-399.	1.2	4
57	Supervisor localization for large-scale discrete-event systems. , 2009, , .		3
58	Checking delay-robustness of distributed supervisors of discrete-event systems. , 2012, , .		3
59	Supervisor localization of discrete-event systems based on State Tree Structures. , 2012, , .		3
60	On Relative Observability of Timed Discrete-Event Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 208-213.	0.4	3
61	Structural controllability and time-to-control of directed scale-free networks with minimum number of driver nodes. Systems and Control Letters, 2021, 156, 105025.	1.3	3
62	Localization of Timed Discrete-Event Systems. Lecture Notes in Control and Information Sciences, 2016, , 153-173.	0.6	3
63	Quantized Average Consensus on Gossip Digraphs with Reduced Computation. SICE Journal of Control Measurement and System Integration, 2011, 4, 236-242.	0.4	3
64	Further results on randomized quantized averaging: A surplus-based approach. , 2010, , .		2
65	Supervision localization of timed discrete-event systems. , 2013, , .		2
66	Local average consensus in distributed measurement of spatial-temporal varying parameters: 1D case. , 2013, , .		2
67	Local average consensus in distributed measurement of spatial-temporal varying parameters: 1D case. Automatica, 2015, 52, 135-145.	3.0	2
68	Supervisor Localization of Timed Discrete-Event Systems Under Partial Observation. IEEE Transactions on Automatic Control, 2020, 65, 295-301.	3.6	2
69	Supervisory Control of Discrete-Event Systems. , 2020, , 1-9.		2
70	Usability aware secret protection with minimum cost. Nonlinear Analysis: Hybrid Systems, 2021, 43, 101111.	2.1	2
71	New Results on Supervisor Localization, with Application to Multi-Agent Formations. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 233-238.	0.4	1
72	Online computation of supremal relatively observable sublanguage of discrete-event systems. , 2015, , .		1

#	ARTICLE	IF	CITATIONS
73	Supervisor localization of timed discrete-event systems under partial observation. , 2016, , .		1
74	Correction to "Relative Observability of Discrete-Event Systems and Its Supremal Sublanguages" IEEE Transactions on Automatic Control, 2017, 62, 511-511.	3.6	1
75	Localization-based distributed control for large discrete-event systems under partial observation. , 2018, , .		1
76	Supervision of Discrete-Event Systems: Basics. Communications and Control Engineering, 2019, , 85-146.	1.0	1
77	A new perspective on cooperative control of multi-agent systems through different types of graph Laplacians. Advanced Robotics, 2023, 37, 2-11.	1.1	1
78	Cooperative monitoring multiple humans using UAVs and fixed camera. , 2017, , .		0
79	Relative coobservability for decentralised supervisory control of discrete-event systems. International Journal of Control, 2019, 92, 1481-1489.	1.2	0
80	Localisation-based distributed control of timed discrete-event systems with communication delay. International Journal of Control, 2020, , 1-10.	1.2	0
81	State-Based Control of Discrete-Event Systems. Communications and Control Engineering, 2019, , 339-359.	1.0	0
82	Supervision of Vector Discrete-Event Systems. Communications and Control Engineering, 2019, , 361-410.	1.0	0
83	Algebraic Preliminaries. Communications and Control Engineering, 2019, , 1-43.	1.0	0
84	Hierarchical Supervision of Discrete-Event Systems. Communications and Control Engineering, 2019, , 205-255.	1.0	0
85	Decentralized and Distributed Supervision of Discrete-Event Systems. Communications and Control Engineering, 2019, , 147-203.	1.0	0
86	An $O(n^2)$ Algorithm for Supervisor Reduction/Localization of Discrete-Event Systems. IFAC-PapersOnLine, 2020, 53, 211-216.	0.5	0
87	N-Step Nonblocking Supervisory Control of Discrete-Event Systems. , 2021, , .		0