Chai Wah Wu

List of Publications by Year
in descending order

116 papers	5,464 citations	136740 32 h-index	91712 69 g-index
119 all docs	119 docs citations	119 times ranked	2315 citing authors

#	Article	IF	Citations
1	Synchronization in an array of linearly coupled dynamical systems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1995, 42, 430-447.	0.1	820
2	A SIMPLE WAY TO SYNCHRONIZE CHAOTIC SYSTEMS WITH APPLICATIONS TO SECURE COMMUNICATION SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1993, 03, 1619-1627.	0.7	411
3	Cryptography based on chaotic systems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1997, 44, 469-472.	0.1	292
4	A UNIFIED FRAMEWORK FOR SYNCHRONIZATION AND CONTROL OF DYNAMICAL SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1994, 04, 979-998.	0.7	282
5	SPREAD SPECTRUM COMMUNICATION THROUGH MODULATION OF CHAOS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1993, 03, 469-477.	0.7	274
6	Synchronization in networks of nonlinear dynamical systems coupled via a directed graph. Nonlinearity, 2005, 18, 1057-1064.	0.6	247
7	Synchronization and Convergence of Linear Dynamics in Random Directed Networks. IEEE Transactions on Automatic Control, 2006, 51, 1207-1210.	3.6	209
8	ON ADAPTIVE SYNCHRONIZATION AND CONTROL OF NONLINEAR DYNAMICAL SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1996, 06, 455-471.	0.7	189
9	Synchronization in arrays of coupled nonlinear systems with delay and nonreciprocal time-varying coupling. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2005, 52, 282-286.	2.3	128
10	Algebraic connectivity of directed graphs. Linear and Multilinear Algebra, 2005, 53, 203-223.	0.5	125
11	ADAPTIVE SYNCHRONIZATION OF CHUA'S OSCILLATORS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1996, 06, 189-201.	0.7	119
12	Application of graph theory to the synchronization in an array of coupled nonlinear oscillators. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1995, 42, 494-497.	0.1	109
13	Synchronization in arrays of coupled nonlinear systems: passivity, circle criterion, and observer design. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2001, 48, 1257-1261.	0.1	108
14	On the universe of stable cellular neural networks. International Journal of Circuit Theory and Applications, 1992, 20, 497-517.	1.3	102
15	Application of Kronecker products to the analysis of systems with uniform linear coupling. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1995, 42, 775-778.	0.1	97
16	CHUA'S EQUATION WITH CUBIC NONLINEARITY. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1996, 06, 2175-2222.	0.7	79
17	Perturbation of coupling matrices and its effect on the synchronizability in arrays of coupled chaotic systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 319, 495-503.	0.9	77
18	On a conjecture regarding the synchronization in an array of linearly coupled dynamical systems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1996, 43, 161-165.	0.1	71

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19	Communication Systems via Chaotic Signals from a Reconstruction Viewpoint. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1997, 07, 275-286.	0.7	70
20	On the design of content-based multimedia authentication systems. IEEE Transactions on Multimedia, 2002, 4, 385-393.	5.2	67
21	Synchronization in coupled arrays of chaotic oscillators with nonreciprocal coupling. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 2003, 50, 294-297.	0.1	61
22	On Rayleigh–Ritz ratios of a generalized Laplacian matrix of directed graphs. Linear Algebra and Its Applications, 2005, 402, 207-227.	0.4	57
23	Fuzzy cellular neural networks: theory. , 0, , .		56
24	JiffyTune: circuit optimization using time-domain sensitivities. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 1998, 17, 1292-1309.	1.9	52
25	A more rigorous proof of complete stability of cellular neural networks. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1997, 44, 370-371.	0.1	50
26	On bounds of extremal eigenvalues of irreducible and m-reducible matrices. Linear Algebra and Its Applications, 2005, 402, 29-45.	0.4	48
27	Chua's oscillator: A compendium of chaotic phenomena. Journal of the Franklin Institute, 1994, 331, 705-741.	1.9	47
28	On the relationship between pinning control effectiveness and graph topology in complex networks of dynamical systems. Chaos, 2008, 18, 037103.	1.0	47
29	Synchronization of Chua's circuits with time-varying channels and parameters. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1996, 43, 862-868.	0.1	44
30	LORENZ EQUATION AND CHUA'S EQUATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1996, 06, 2443-2489.	0.7	38
31	Complex behavior in digital filters with overflow nonlinearity: analytical results. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 1996, 43, 234-246.	2.3	34
32	Incentivized Peer-Assisted Streaming for On-Demand Services. IEEE Transactions on Parallel and Distributed Systems, 2010, 21, 1354-1367.	4.0	33
33	Coupling Strength Allocation for Synchronization in Complex Networks Using Spectral Graph Theory. IEEE Transactions on Circuits and Systems I: Regular Papers, 2014, 61, 1520-1530.	3.5	31
34	Properties of admissible symbolic sequences in a second–order digital filter with overflow non–linearity. International Journal of Circuit Theory and Applications, 1993, 21, 299-307.	1.3	30
35	Graph coloring via synchronization of coupled oscillators. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1998, 45, 974-978.	0.1	30
36	Synchronizability of networks of chaotic systems coupled via a graph with a prescribed degree sequence. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 346, 281-287.	0.9	30

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37	Synchronization in Directed Complex Networks Using Graph Comparison Tools. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 1185-1194.	3.5	30
38	Master-slave synchronization and the Lorenz equations. Chaos, 1997, 7, 392-394.	1.0	25
39	INTRODUCTION TO EXPERIMENTAL CHAOS USING CHUA'S CIRCUIT. World Scientific Series on Nonlinear Science, Series B, 1993, , 59-89.	0.2	21
40	Symbolic dynamics of piecewise-linear maps. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 1994, 41, 420-424.	2.3	21
41	Multimedia Data Hiding and Authentication via Halftoning and Coordinate Projection. Eurasip Journal on Advances in Signal Processing, 2002, 2002, 1.	1.0	19
42	Conditions for separability in generalized Laplacian matrices and diagonally dominant matrices as density matrices. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 351, 18-22.	0.9	19
43	ON THE GENERALITY OF THE UNFOLDED CHUA'S CIRCUIT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1996, 06, 801-832.	0.7	18
44	Torus-doubling bifurcations in four mutually coupled Chua's circuits. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1998, 45, 186-193.	0.1	17
45	Fundamentals of Dynamic Decentralized Optimization in Autonomic Computing Systems. Lecture Notes in Computer Science, 2005, , 204-218.	1.0	17
46	Topology design for fast convergence of network consensus algorithms. , 2007, , .		16
47	Conditions for weak ergodicity of inhomogeneous Markov chains. Statistics and Probability Letters, 2008, 78, 3082-3085.	0.4	16
48	<title>Digital watermarking and steganography via overlays of halftone images</title>. , 2004, 5561, 152.		14
49	Comparative studies of load balancing with control and optimization techniques. , 0, , .		14
50	Agreement and consensus problems in groups of autonomous agents with linear dynamics. , 0, , .		12
51	Circuit optimization via adjoint Lagrangians. , 1997, , .		11
52	The optimality of the online greedy algorithm in carpool and chairman assignment problems. ACM Transactions on Algorithms, 2011, 7, 1-22.	0.9	9
53	Direct multi-bit search (DMS) screen algorithm. , 2012, , .		9
54	Multipartite Separability of Laplacian Matrices of Graphs. Electronic Journal of Combinatorics, 2009, 16, .	0.2	9

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55	Synchronization in arrays of coupled nonlinear systems: passivity circle criterion and observer design. , 0, , .		8
56	Localization of effective pinning control in complex networks of dynamical systems. , 2008, , .		8
57	GPU-enabled parallel processing for image halftoning applications. , 2011, , .		8
58	Synchronization in Dynamical Systems Coupled via Multiple Directed Networks. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 1660-1664.	2.2	8
59	SYNCHRONIZING NONAUTONOMOUS CHAOTIC SYSTEMS WITHOUT PHASE-LOCKING. Journal of Circuits, Systems and Computers, 1996, 06, 227-241.	1.0	7
60	Global synchronization in coupled map lattices. , 0, , .		7
61	A unifying proof of global asymptotical stability of neural networks with delay. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2005, 52, 181-184.	2.3	7
62	On graphs whose Laplacian matrix's multipartite separability is invariant under graph isomorphism. Discrete Mathematics, 2010, 310, 2811-2814.	0.4	7
63	A content-based image authentication system with lossless data hiding. , 2003, , .		6
64	Multiple images viewable on twisted-nematic mode liquid-crystal displays. IEEE Signal Processing Letters, 2003, 10, 225-227.	2.1	6
65	Synchronization in systems coupled via complex networks. , 0, , .		5
66	On linear topological conjugacy of Lur'e systems. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1996, 43, 158-161.	0.1	5
67	New results and measurements related to some tasks in object-oriented dynamic image coding using CNN universal chips. IEEE Transactions on Circuits and Systems for Video Technology, 1997, 7, 606-614.	5.6	5
68	Error bounds for error diffusion and related digital halftoning algorithms. , 0, , .		5
69	Location dependent heuristics for sensor coverage planning. Proceedings of SPIE, 2008, , .	0.8	5
70	On control of networks of dynamical systems. , 2010, , .		5
71	A GPU implementation of color digital halftoning using the Direct Binary Search algorithm. , 2012, , .		5
72	ON THE GENERATION OF SCROLL WAVES IN A THREE-DIMENSIONAL DISCRETE ACTIVE MEDIUM. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1995, 05, 313-320.	0.7	4

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73	On nonlinear dynamical systems topologically conjugate to jerky motion via a linear transformation. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 296, 105-108.	0.9	4
74	Non-intrusive Adaptive Multi-media Routing in Peer-to-Peer Multi-party Video Conferencing. , 2010, , .		4
75	Control Localization in Networks of Dynamical Systems Connected via a Weighted Tree. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2017, 47, 3030-3036.	5.9	4
76	Control of Networks of Coupled Dynamical Systems. Understanding Complex Systems, 2013, , 23-50.	0.3	4
77	Synchronization in arrays of chaotic circuits coupled via hypergraphs: static and dynamic coupling. , 0, , .		3
78	ON THREE OSCILLATOR UNIVERSAL PROBES FOR DETERMINING SYNCHRONIZATION IN ARRAYS OF COUPLED OSCILLATORS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2002, 12, 2233-2238.	0.7	3
79	On some properties of contracting matrices. Linear Algebra and Its Applications, 2008, 428, 2509-2523.	0.4	3
80	New spectral graph theoretic conditions for synchronization in directed complex networks. , 2013, , .		3
81	A GPU based implementation of direct multi-bit search (DMS) screen algorithm. Proceedings of SPIE, 2013, , .	0.8	3
82	Direct binary search (DBS) algorithm with constraints. Proceedings of SPIE, 2013, , .	0.8	3
83	Graphs whose normalized Laplacian matrices are separable as density matrices in quantum mechanics. Discrete Mathematics, 2016, 339, 1377-1381.	0.4	3
84	DIGITAL SIGNAL PROCESSOR-BASED INVESTIGATION OF CHUA'S CIRCUIT FAMILY. Journal of Circuits, Systems and Computers, 1993, 03, 269-292.	1.0	2
85	SYNCHRONIZATION IN ARRAYS OF CHAOTIC CIRCUITS COUPLED VIA DYNAMIC COUPLING ELEMENTS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2000, 10, 819-827.	0.7	2
86	Privacy preserving data mining with unidirectional interaction. , 0, , .		2
87	Synchronization in an array of chaotic systems coupled via a directed graph. , 0, , .		2
88	PACTS: A Service Oriented Architecture for Real-Time Peer-Assisted Content Delivery Service. , 2008, , .		2
89	A sensor placement algorithm for redundant covering based on Riesz energy minimization. , 2008, , .		2
90	Performance study of peer-to-peer video streaming on complex networks. , 2009, , .		2

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91	Application of halftoning algorithms to location dependent sensor placement. , 2009, , .		2
92	Can stubbornness or gullibility lead to faster consensus? A study of various strategies for reaching consensus in a model of the naming game. , 2011, , .		2
93	FINDING PARAMETERS FOR CHUA'S OSCILLATOR WHICH IS TOPOLOGICALLY CONJUGATE TO SYSTEMS WITH A SCALAR NONLINEARITY. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1995, 05, 895-899.	0.7	1
94	Quantized sampling as sampling with uncertainty in time and amplitude. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1998, 45, 458-463.	0.1	1
95	A unifying group of global asymptotical stability of neural networks with delay. , 0, , .		1
96	On two approaches to analyzing consensus in complex networks. , 2007, , .		1
97	More is more: The benefits of dense sensor deployment. , 2008, , .		1
98	Locally connected processor arrays for matrix multiplication and linear transforms. , 2011, , .		1
99	Contingency constrained optimal power flow solutions in complex network power grids. , 2012, , .		1
100	Cellular wave computing via nanoscale chip architectures. International Journal of Circuit Theory and Applications, 2012, 40, 1187-1189.	1.3	1
101	A Riesz energy based approach to generating dispersed dot patterns for halftoning applications. Proceedings of SPIE, 2014, , .	0.8	1
102	Hybrid halftoning using direct multi-bit search (DMS) screen algorithm. , 2014, , .		1
103	A Simple Proof of a Generalized Cauchy–Binet Theorem. American Mathematical Monthly, 2016, 123, 928.	0.2	1
104	On generalizations of Schur's inequality on sums of products of differences of real numbers. Linear and Multilinear Algebra, 0, , 1-17.	0.5	1
105	On the Control of Epidemic-Like Stochastic Processes with Time-Varying Behavior?. Performance Evaluation Review, 2015, 43, 78-80.	0.4	1
106	CHUA'S CIRCUIT: CHAOTIC PHENOMENA AND APPLICATIONS. , 1995, , 265-300.		0
107	ON A VARIATION OF THE HUBERMAN-LUMER ADAPTIVE SCHEME. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1996, 06, 1397-1407.	0.7	0
108	Simple three oscillator universal probes for determining synchronization stability in coupled arrays of oscillators. , 0, , .		0

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109	Cellular wave computing via nanoscale chip architectures. International Journal of Circuit Theory and Applications, 2010, 38, 883-884.	1.3	0
110	A Feasibility Study of Collaborative Stream Routing in Peer-to-Peer Multiparty Video Conferencing. , 2011, , .		0
111	NONLINEAR ELECTRONICS LABORATORY (NOEL): A REMINISCENCE. , 2013, , 124-134.		0
112	[From the Guest Editors]. IEEE Circuits and Systems Magazine, 2013, 13, 4-6.	2.6	0
113	Pigeonholes and Repunits. American Mathematical Monthly, 2014, 121, 529.	0.2	0
114	GerÅ¡gorin variations IV: A left eigenvector approach. Linear Algebra and Its Applications, 2016, 498, 136-144.	0.4	0
115	[From the Editor]. IEEE Circuits and Systems Magazine, 2016, 16, 3-3.	2.6	0
116	DIGITAL SIGNAL PROCESSOR-BASED INVESTIGATION OF CHUA'S CIRCUIT FAMILY. World Scientific Series on Nonlinear Science, Series B, 1993, , 769-792.	0.2	0