John T Wen

List of Publications by Year
in descending order

		87888	69250
152 papers	6,725 citations	38 h-index	77 g-index
152 all docs	152 docs citations	152 times ranked	3495 citing authors

#	Article	IF	Citations
1	The attitude control problem. IEEE Transactions on Automatic Control, 1991, 36, 1148-1162.	5.7	889
2	Galerkin approximations of the generalized Hamilton-Jacobi-Bellman equation. Automatica, 1997, 33, 2159-2177.	5.0	519
3	Attitude control without angular velocity measurement: a passivity approach. IEEE Transactions on Automatic Control, 1996, 41, 468-472.	5.7	348
4	Robust attitude stabilization of spacecraft using nonlinear quaternion feedback. IEEE Transactions on Automatic Control, 1995, 40, 1800-1803.	5.7	234
5	Time domain and frequency domain conditions for strict positive realness. IEEE Transactions on Automatic Control, 1988, 33, 988-992.	5.7	222
6	Preisach modeling of piezoceramic and shape memory alloy hysteresis. Smart Materials and Structures, 1997, 6, 287-300.	3.5	217
7	New class of control laws for robotic manipulators Part 1. Non–adaptive case. International Journal of Control, 1988, 47, 1361-1385.	1.9	211
8	A Unifying Passivity Framework for Network Flow Control. IEEE Transactions on Automatic Control, 2004, 49, 162-174.	5.7	175
9	Approximate Solutions to the Time-Invariant Hamilton–Jacobi–Bellman Equation. Journal of Optimization Theory and Applications, 1998, 96, 589-626.	1.5	162
10	Motion and force control of multiple robotic manipulators. Automatica, 1992, 28, 729-743.	5.0	161
11	Ledinegg instability in microchannels. International Journal of Heat and Mass Transfer, 2009, 52, 5661-5674.	4.8	155
12	Rigid body attitude coordination without inertial frame information. Automatica, 2008, 44, 3170-3175.	5.0	142
13	BP neural network prediction-based variable-period sampling approach for networked control systems. Applied Mathematics and Computation, 2007, 185, 976-988.	2.2	135
14	Trajectory tracking control of a car-trailer system. IEEE Transactions on Control Systems Technology, 1997, 5, 269-278.	5.2	126
15	Cooperative Control Design. Communications and Control Engineering, 2011, , .	1.6	126
16	Analysis and active control of pressure-drop flow instabilities in boiling microchannel systems. International Journal of Heat and Mass Transfer, 2010, 53, 2347-2360.	4.8	119
17	Robust adaptive control in Hilbert Space. Journal of Mathematical Analysis and Applications, 1989, 143, 1-26.	1.0	115
18	Cooperative Load Transport: A Formation-Control Perspective. IEEE Transactions on Robotics, 2010, 26, 742-750.	10.3	114

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19	New class of control laws for robotic manipulators Part 2. Adaptive case. International Journal of Control, 1988, 47, 1387-1406.	1.9	103
20	Stability analysis of position and force control for robot arms. IEEE Transactions on Automatic Control, 1991, 36, 365-371.	5.7	102
21	A path space approach to nonholonomic motion planning in the presence of obstacles. IEEE Transactions on Automation Science and Engineering, 1997, 13, 443-451.	2.3	101
22	Title is missing!. Smart Materials and Structures, 1997, 6, 265-277.	3.5	99
23	Adaptive design for reference velocity recovery in motion coordination. Systems and Control Letters, 2008, 57, 602-610.	2.3	94
24	Adaptive motion coordination: Using relative velocity feedback to track a reference velocity. Automatica, 2009, 45, 1020-1025.	5.0	94
25	Adaptive Scanning Optical Microscope (ASOM): A multidisciplinary optical microscope design for large field of view and high resolution imaging. Optics Express, 2005, 13, 6504.	3.4	90
26	Two-phase refrigerant flow instability analysis and active control in transient electronics cooling systems. International Journal of Multiphase Flow, 2011, 37, 84-97.	3.4	75
27	A Sensor-Based Dual-Arm Tele-Robotic System. IEEE Transactions on Automation Science and Engineering, 2015, 12, 4-18.	5.2	75
28	Kinematic manipulability of general constrained rigid multibody systems. IEEE Transactions on Automation Science and Engineering, 1999, 15, 558-567.	2.3	73
29	A global approach to path planning for redundant manipulators. IEEE Transactions on Automation Science and Engineering, 1995, 11, 152-160.	2.3	69
30	BEES: Real-time occupant feedback and environmental learning framework for collaborative thermal management in multi-zone, multi-occupant buildings. Energy and Buildings, 2016, 125, 142-152.	6.7	63
31	Automated Multiprobe Microassembly Using Vision Feedback. IEEE Transactions on Robotics, 2012, 28, 1090-1103.	10.3	60
32	Modeling and control of color tunable lighting systems. Energy and Buildings, 2014, 68, 242-253.	6.7	60
33	Stability analysis and maldistribution control of two-phase flow in parallel evaporating channels. International Journal of Heat and Mass Transfer, 2011, 54, 5298-5305.	4.8	58
34	Lyapunov function-based control laws for revolute robot arms: tracking control, robustness, and adaptive control. IEEE Transactions on Automatic Control, 1992, 37, 231-237.	5.7	55
35	Power control for multicell CDMA wireless networks: A team optimization approach. Wireless Networks, 2008, 14, 647-657.	3.0	55
36	A unified perspective on robot control: The energy lyapunov function approach. International Journal of Adaptive Control and Signal Processing, 1990, 4, 487-500.	4.1	49

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37	The steady-state modeling and optimization of a refrigeration system for high heat flux removal. Applied Thermal Engineering, 2010, 30, 2347-2356.	6.0	49
38	Collaborative human-robot manipulation of highly deformable materials. , 2015, , .		47
39	Collaborative Energy and Thermal Comfort Management Through Distributed Consensus Algorithms. IEEE Transactions on Automation Science and Engineering, 2015, 12, 1285-1296.	5.2	42
40	Asymptotically stable set point control laws for flexible robots. Systems and Control Letters, 1992, 19, 119-129.	2.3	41
41	Nonlinear Model Predictive Control for the Swing-Up of a Rotary Inverted Pendulum. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2004, 126, 666-673.	1.6	39
42	Robustness of network flow control against disturbances and time-delay. Systems and Control Letters, 2004, 53, 13-29.	2.3	39
43	Building temperature control: A passivity-based approach. , 2012, , .		39
44	Feedback Control Using Shape Memory Alloy Actuators. Journal of Intelligent Material Systems and Structures, 1998, 9, 242-250.	2.5	38
45	High Performance Motion Tracking Control for Electronic Manufacturing. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2007, 129, 767-776.	1.6	38
46	Vapor compression refrigeration cycle for electronics cooling â€" Part I: Dynamic modeling and experimental validation. International Journal of Heat and Mass Transfer, 2013, 66, 911-921.	4.8	37
47	Singularities in three-legged platform-type parallel mechanisms. IEEE Transactions on Automation Science and Engineering, 2003, 19, 720-726.	2.3	32
48	Database-Driven Iterative Learning for Building Temperature Control. IEEE Transactions on Automation Science and Engineering, 2019, 16, 1896-1906.	5.2	25
49	Robot Raconteur: A communication architecture and library for robotic and automation systems. , 2011, , .		23
50	Industrial Robot Trajectory Tracking Control Using Multi-Layer Neural Networks Trained by Iterative Learning Control. Robotics, 2021, 10, 50.	3.5	20
51	Vapor compression refrigeration cycle for electronics cooling â€" Part II: gain-scheduling control for critical heat flux avoidance. International Journal of Heat and Mass Transfer, 2013, 66, 922-929.	4.8	19
52	Characteristics of pressure drop oscillation in a microchannel cooling system. Applied Thermal Engineering, 2019, 160, 113849.	6.0	18
53	Determination of unstable singularities in parallel robots with N arms. , 2006, 22, 160-167.		17
54	Coverage of a Planar Point Set With Multiple Robots Subject to Geometric Constraints. IEEE Transactions on Automation Science and Engineering, 2010, 7, 111-122.	5.2	17

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55	Light-based circadian rhythm control: Entrainment and optimization. Automatica, 2016, 68, 44-55.	5.0	17
56	Collaborative manipulation with multiple dual-arm robots under human guidance. International Journal of Intelligent Robotics and Applications, 2018, 2, 252-266.	2.8	17
57	Time optimal entrainment control for circadian rhythm. PLoS ONE, 2019, 14, e0225988.	2.5	17
58	Robotic Deep Rolling With Iterative Learning Motion and Force Control. IEEE Robotics and Automation Letters, 2020, 5, 5581-5588.	5.1	17
59	Singular Perturbation Method for Smart Building Temperature Control Using Occupant Feedback. Asian Journal of Control, 2018, 20, 386-402.	3.0	16
60	An all-geodesic algorithm for filament winding of a T-shaped form. IEEE Transactions on Industrial Electronics, 1991, 38, 484-490.	7.9	15
61	Optimal circadian rhythm control with light input for rapid entrainment and improved vigilance. , 2012, , .		15
62	Building temperature control with adaptive feedforward. , 2013, , .		15
63	Incentive-Based Mechanism for Truthful Occupant Comfort Feedback in Human-in-the-Loop Building Thermal Management. IEEE Systems Journal, 2018, 12, 3725-3736.	4.6	15
64	Temperature synchronization across parallel microchannels during flow boiling. International Journal of Thermal Sciences, 2020, 156, 106476.	4.9	15
65	Groundhog Day: Iterative learning for building temperature control. , 2014, , .		14
66	Robotic system for collaborative control in minimally invasive surgery. Industrial Robot, 1999, 26, 476-484.	2.1	13
67	Circadian system modeling and phase control. , 2010, , .		13
68	Design and instrumentation of an intelligent building testbed. , 2015, , .		13
69	Entrainment Control of Phase Dynamics. IEEE Transactions on Automatic Control, 2017, 62, 445-450.	5.7	13
70	Human-directed coordinated control of an assistive mobile manipulator. International Journal of Intelligent Robotics and Applications, 2017, 1, 104-120.	2.8	13
71	SINGULARITY COMPUTATION FOR ITERATIVE CONTROL OF NONLINEAR AFFINE SYSTEMS. Asian Journal of Control, 2000, 2, 57-75.	3.0	12
72	The analysis and prediction of pressure drop oscillation in phase-change cooling systems. International Journal of Heat and Mass Transfer, 2021, 165, 120621.	4.8	12

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73	Order Reduction for Large-Scale Finite Element Models: A Systems Perspective. International Journal for Multiscale Computational Engineering, 2005, 3, 337-362.	1.2	12
74	Automation of Challenging Spatial-Temporal Biomedical Observations With the Adaptive Scanning Optical Microscope (ASOM). IEEE Transactions on Automation Science and Engineering, 2009, 6, 525-535.	5.2	11
75	Jamster: A mobile dual-arm assistive robot with Jamboxx control. , 2014, , .		11
76	Moving boundary model for dynamic control of multi-evaporator cooling systems facing variable heat loads. International Journal of Refrigeration, 2020, 120, 481-492.	3.4	11
77	Adaptive Neural Trajectory Tracking Control for Flexible-Joint Robots with Online Learning. , 2020, , .		10
78	Dynamic Control of Pressure Drop Oscillation in a Microchannel Cooling System. Heat Transfer Engineering, 2021, 42, 517-532.	1.9	10
79	Neural-Learning Trajectory Tracking Control of Flexible-Joint Robot Manipulators with Unknown Dynamics. , 2019, , .		9
80	Dynamic control of microchannel cooling system with unanticipated evaporator heat loads. Applied Thermal Engineering, 2021, 183, 116225.	6.0	9
81	A Two-Time-Scale Design for Edge-Based Detection and Rectification of Uncooperative Flows. IEEE/ACM Transactions on Networking, 2006, 14, 1313-1322.	3.8	8
82	Wide Field Scanning Telescope Using MEMS Deformable Mirrors. International Journal of Optomechatronics, 2010, 4, 285-305.	6.6	8
83	Modeling and control of single and multiple evaporator vapor compression cycles for electronics cooling. , 2013, , .		8
84	A comfort zone set-based approach for coupled temperature and humidity control in buildings. , 2016, , .		8
85	Trajectory Generation for Flexible-Joint Space Manipulators. Frontiers in Robotics and AI, 2022, 9, 687595.	3.2	8
86	Successive galerkin approximation of the isaacs equation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1999, 32, 2071-2076.	0.4	7
87	A decentralized design for group alignment and synchronous rotation without inertial frame information. , 2007, , .		7
88	Group Coordination when the Reference Velocity is Available Only to the Leader: An Adaptive Design. Proceedings of the American Control Conference, 2007, , .	0.0	7
89	Multiâ€input adaptive notch filter and observer for circadian phase estimation. International Journal of Adaptive Control and Signal Processing, 2016, 30, 1375-1388.	4.1	7
90	Iterative Learning Control for Coupled Temperature and Humidity in Buildings. IFAC-PapersOnLine, 2017, 50, 13420-13425.	0.9	7

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91	Analysis and Active Control of Pressure Drop Oscillation in Microchannel Vapor Compression Cycle. , 2018, , .		7
92	Finite dimensional controller design for infinite dimensional systems: The circle criterion approach. Systems and Control Letters, 1989, 13, 445-454.	2.3	6
93	Passivity motivated controller design for flexible structures. Journal of Guidance, Control, and Dynamics, 1996, 19, 726-729.	2.8	6
94	Motion Blur-Based State Estimation. IEEE Transactions on Control Systems Technology, 2016, 24, 1012-1019.	5.2	6
95	Actigraphy-based parameter tuning process for adaptive notch filter and circadian phase shift estimation. Chronobiology International, 2020, 37, 1552-1564.	2.0	6
96	Optimization of light exposure and sleep schedule for circadian rhythm entrainment. PLoS ONE, 2021, 16, e0251478.	2.5	6
97	Passivity based iterative learning control for mechanical systems subject to dry friction. , 2008, , .		5
98	Using orientation agreement to achieve planar rigid formation. , 2008, , .		5
99	Modeling and control of a fast steering mirror in imaging applications. , 2010, , .		5
100	Adaptive circadian rhythm estimator and its application to locomotor activity. , 2012, , .		5
101	Office building model identification and control design. , 2014, , .		5
102	Human-directed robot motion/force control for contact tasks in unstructured environments. , 2015, , .		5
103	Time-optimal control for circadian entrainment for a model with circadian and sleep dynamics. , 2017, , .		5
104	A Multi-Sensor Next-Best-View Framework for Geometric Model-Based Robotics Applications. , 2019, , .		5
105	Comparing Position- and Image-Based Visual Servoing for Robotic Assembly of Large Structures. , 2020, , .		5
106	Sensor-Guided Assembly of Segmented Structures with Industrial Robots. Applied Sciences (Switzerland), 2021, 11, 2669.	2.5	5
107	Manipulation of Massive Objects in Space Using Flexible Joint Manipulators. Journal of Guidance, Control, and Dynamics, 2021, 44, 923-937.	2.8	5
108	Automation of Challenging Spatial-Temporal Biomedical Observations with the Adaptive Scanning Optical Microscope (ASOM). , 2006, , .		4

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109	Coverage of a Planar Point Set with Multiple Constrained Robots. , 2007, , .		4
110	Design of Adaptive Optics Based Systems by Using MEMS Deformable Mirror Models. International Journal of Optomechatronics, 2008, 2, 104-125.	6.6	4
111	Experimental identification of evaporator dynamics for vapor compression refrigeration cycle during phase transition. , 2010, , .		4
112	Human-robot cooperative control for mobility impaired individuals. , 2015, , .		4
113	Model predictive control of vapor compression cycle for large transient heat flux cooling. , 2016, , .		4
114	Slip Avoidance in Dual-Arm Manipulation. , 2018, , .		4
115	Software Framework for Robot-Assisted Large Structure Assembly. , 2018, , .		4
116	Asymptotic Synchronization of Phase Oscillators With a Single Input. IEEE Transactions on Automatic Control, 2019, 64, 1611-1618.	5.7	4
117	A Comparison of Finite Element and Lumped Modeling Techniques to Analyze Flow Boiling in Microchannels. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 1655-1667.	2.5	4
118	Effect of Oscillatory Heat Load on Pressure Drop Oscillation. International Journal of Heat and Mass Transfer, 2022, 194, 123077.	4.8	4
119	Motion coordination through cooperative payload transport. , 2009, , .		3
120	Adaptive circadian argument estimator and its application to circadian argument control. , 2013, , .		3
121	Finite element model based temperature consensus control for material microstructure. , 2015, , .		3
122	Experimental Study and Mitigation of Pressure Drop Oscillation Using Active Control. Journal of Electronic Packaging, Transactions of the ASME, 2021, 143, .	1.8	3
123	Oscillatory valve effect on temperature synchronization in microchannel cooling systems. Applied Thermal Engineering, 2022, 204, 117999.	6.0	3
124	Control system design for a robotic autoloader. , 1984, , .		2
125	Stability Analysis of Position and Force Control Problems for Robot Arms. , 1990, , .		2
126	Experimental verification of formation control with distributed cameras. , 2009, , .		2

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127	Stability analysis of refrigeration systems for electronics cooling. , 2009, , .		2
128	Micro-thermal-fluid transient analysis and active control for two-phase microelectronics cooling. , 2010, , .		2
129	Hybrid model reduction for compressible flow controller design. , 2011, , .		2
130	Optimal and feedback control for light-based circadian entrainment. , 2013, , .		2
131	Material grain growth consensus control: A multi-zone heating approach applied on a Monte-Carlo model. , 2016, , .		2
132	Substrates with Programmable Heater Arrays for In-Situ Observation of Microstructural Evolution of Polycrystalline Films: Towards Real Time Control of Grain Growth. MRS Advances, 2016, 1, 1947-1952.	0.9	2
133	Assessing circadian rhythms and entrainment via intracranial temperature after severe head trauma. Biomedical Signal Processing and Control, 2019, 54, 101610.	5.7	2
134	Iterative learning control for nonsmooth dynamical systems. , 2007, , .		1
135	Off-axis aberration correction for a wide field scanning telescope. , 2008, , .		1
136	Image Tracking of Multiple <i>C. Elegans</i> Worms Using Adaptive Scanning Optical Microscope (ASOM). International Journal of Optomechatronics, 2010, 4, 1-21.	6.6	1
137	Low-order nonlinear models for active flow control of a low L/D inlet duct. , 2010, , .		1
138	Passivity based distributed control: Optimality, stability and robustness. , 2013, , .		1
139	Rapid Circadian Entrainment in Models of Circadian Genes Regulation. , 2019, , .		1
140	Automatic sleeping time estimation and mild traumatic brain injury (mTBI) detection using actigraphy data. Biomedical Signal Processing and Control, 2021, 66, 102430.	5.7	1
141	The Optimal Multiplier Method for Nonlinear Robustness Analysis. , 1990, , .		1
142	Human Alertness Optimization with a Three-Process Dynamic Model. Mathematics, 2022, 10, 1916.	2.2	1
143	Robust Control for Linear Stages in Electronic Manufacturing. Proceedings of the American Control Conference, 2007, , .	0.0	0
144	Adaptive motion coordination: Using velocity feedback to achieve parameter convergence. , 2008, , .		0

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145	Two-phase flow instability analysis for transient electronics cooling. , 2010, , .		0
146	Application of the Smith-&#x00C5;str&#x00F6;m Predictor to robot force control. , 2015, , .		0
147	Inverse heat transfer analysis for design and control of a micro-heater array. Inverse Problems in Science and Engineering, 2017, 25, 1259-1277.	1.2	0
148	Active grain growth control with distributed heating. Acta Materialia, 2020, 183, 301-312.	7.9	0
149	Building Comfort and Environmental Control. , 2021, , 169-174.		0
150	Hierarchical Systems Level Thermal Management for Multiple High Transient Heat Loads. , 2018, , 39-90.		0
151	Building Comfort and Environmental Control. , 2020, , 1-7.		0
152	Finite Dimensional Controller Design for Infinite Dimensional Systems: A Passivity Approach. , 1989, , .		0