

# Tong Heng Lee

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

143  
papers

2,464  
citations

26  
h-index

46  
g-index

196  
ext. papers

3,133  
ext. citations

4.9  
avg, IF

5.28  
L-index

#	Paper	IF	Citations
143	Practical Time-Synchronized Attitude Control for Disturbed Spacecraft <b>2022</b> , 221-250		
142	Time-Synchronized Spacecraft Control in Rendezvous and Docking <b>2022</b> , 189-220		
141	Time-Synchronized Stability <b>2022</b> , 11-41		
140	Time-Synchronized Consensus of Network Systems <b>2022</b> , 165-187		
139	Fixed-Time-Synchronized Control with Settling Time Estimation <b>2022</b> , 133-163		
138	Time-Synchronized Sliding Modes <b>2022</b> , 43-60		
137	Fixed-Time-Synchronized Control with Singularity Avoidance <b>2022</b> , 101-131		
136	Time-Synchronized Control for Disturbed Systems <b>2022</b> , 61-99		1
135	Hybrid Active-Passive Robust Control Framework of a Flexure-Joint Dual-Drive Gantry Robot for High-Precision Contouring Tasks. <i>IEEE Transactions on Industrial Electronics</i> , <b>2022</b> , 1-1	8.9	1
134	Online Optimal Power Scheduling of a Microgrid via Imitation Learning. <i>IEEE Transactions on Smart Grid</i> , <b>2021</b> , 1-1	10.7	1
133	. <i>IEEE Transactions on Automatic Control</i> , <b>2021</b> , 66, 5554-5560	5.9	13
132	Fixed-Time-Synchronized Consensus Control of Multiagent Systems. <i>IEEE Transactions on Control of Network Systems</i> , <b>2021</b> , 8, 89-98	4	25
131	Iterative Super-Twisting Sliding Mode Control for Tray Indexing System With Unknown Dynamics. <i>IEEE Transactions on Industrial Electronics</i> , <b>2021</b> , 68, 9855-9865	8.9	6
130	Set Invariance and Optimal Set Stabilization of Boolean Control Networks: A Graphical Approach. <i>IEEE Transactions on Control of Network Systems</i> , <b>2021</b> , 8, 400-412	4	2
129	On Robust Stability and Performance With a Fixed-Order Controller Design for Uncertain Systems. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , <b>2021</b> , 1-13	7.3	5
128	. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2021</b> , 1-1	5.5	6
127	Simultaneous-Arrival-to-Origin Convergence: Sliding-Mode Control through the Norm-Normalized Sign Function. <i>IEEE Transactions on Automatic Control</i> , <b>2021</b> , 1-1	5.9	10

126	. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , <b>2021</b> , 1-14	7.3	15
125	Adaptive Robust Impedance Control for an Ear Surgical Device with Soft Interaction. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2021</b> , 1-1	5.5	0
124	. <i>IEEE Transactions on Industrial Electronics</i> , <b>2021</b> , 1-1	8.9	2
123	Convex Inner Approximation for Mixed H2/H-Infinity Control with Application to a 2-DoF Flexure-Based Nano-Positioning System. <i>IEEE Transactions on Industrial Electronics</i> , <b>2021</b> , 1-1	8.9	4
122	. <i>IEEE Transactions on Intelligent Transportation Systems</i> , <b>2021</b> , 1-12	6.1	2
121	Sequential Convex Programming for Collaboration of Connected and Automated Vehicles. <i>IEEE Transactions on Intelligent Vehicles</i> , <b>2021</b> , 1-1	5	0
120	Trajectory Generation by Chance-Constrained Nonlinear MPC With Probabilistic Prediction. <i>IEEE Transactions on Cybernetics</i> , <b>2021</b> , 51, 3616-3629	10.2	10
119	Finite-Horizon Optimal Control of Boolean Control Networks: A Unified Graph-Theoretical Approach. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , <b>2020</b> , PP,	10.3	2
118	. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2020</b> , 25, 1961-1970	5.5	15
117	Unsupervised Cross-domain Fault Diagnosis Using Feature Representation Alignment Networks for Rotating Machinery. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2020</b> , 1-1	5.5	17
116	Semi-Proximal ADMM for Model Predictive Control Problem with Application to a UAV System <b>2020</b> ,		2
115	Infinite-Horizon Optimal Control of Switched Boolean Control Networks With Average Cost: An Efficient Graph-Theoretical Approach. <i>IEEE Transactions on Cybernetics</i> , <b>2020</b> , PP,	10.2	6
114	Learning Asynchronous Boolean Networks From Single-Cell Data Using Multiobjective Cooperative Genetic Programming. <i>IEEE Transactions on Cybernetics</i> , <b>2020</b> , PP,	10.2	1
113	Cooperative Circumnavigation Control of Networked Microsatellites. <i>IEEE Transactions on Cybernetics</i> , <b>2020</b> , 50, 4550-4555	10.2	16
112	Disturbance Compensation by Reference Profile Alteration With Application to Tray Indexing. <i>IEEE Transactions on Industrial Electronics</i> , <b>2019</b> , 66, 9406-9416	8.9	6
111	HLT*: Real-time and Any-angle Path Planning in 3D Environment <b>2019</b> ,		4
110	Data-Driven Tuning Method for LQR Based Optimal PID Controller <b>2019</b> ,		0
109	Autonomous task planning and acting for micro aerial vehicles <b>2019</b> ,		2

108	Data-driven identification and control of nonlinear systems using multiple NARMA-L2 models. <i>International Journal of Robust and Nonlinear Control</i> , <b>2018</b> , 28, 3806-3833	3.6	7
107	GPS/odometry/map fusion for vehicle positioning using potential function. <i>Autonomous Robots</i> , <b>2018</b> , 42, 99-110	3	4
106	Role playing learning for socially concomitant mobile robot navigation. <i>CAAI Transactions on Intelligence Technology</i> , <b>2018</b> , 3, 49-58	9.7	22
105	Efficient Boolean Modeling of Gene Regulatory Networks via Random Forest Based Feature Selection and Best-Fit Extension <b>2018</b> ,		5
104	Teaching of Automation and Control Engineering Practice - A Case Study <b>2018</b> ,		1
103	Geometric Map-Assisted Localization for Mobile Robots Based on Uniform-Gaussian Distribution. <i>IEEE Robotics and Automation Letters</i> , <b>2017</b> , 2, 789-795	4.2	10
102	Adaptive Control of Robotic Manipulators With Unified Motion Constraints. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , <b>2017</b> , 47, 184-194	7.3	43
101	Adaptive control for robot navigation in human environments based on social force model <b>2016</b> ,		3
100	Long-term cooperative tracking using multiple unmanned aerial vehicles <b>2016</b> ,		1
99	Integrated Servo-Mechanical Design of Robust Mechatronics Based on Ambiguous Chance Constraints. <i>IEEE Transactions on Control Systems Technology</i> , <b>2015</b> , 23, 2449-2456	4.8	3
98	Power-Efficient Interrupt-Driven Algorithms for Fall Detection and Classification of Activities of Daily Living. <i>IEEE Sensors Journal</i> , <b>2015</b> , 15, 1377-1387	4	39
97	Wide area surveillance of urban environments using multiple Mini-VTOL UAVs <b>2015</b> ,		2
96	Design and Implementation of Integral Sliding-Mode Control on an Underactuated Two-Wheeled Mobile Robot. <i>IEEE Transactions on Industrial Electronics</i> , <b>2014</b> , 61, 3671-3681	8.9	198
95	Integrated servo-mechanical design of robust mechatronics based on low-order moments and support <b>2014</b> ,		1
94	Active vibration isolation based on model reference adaptive control. <i>International Journal of Systems Science</i> , <b>2014</b> , 45, 97-108	2.3	11
93	Systematic Design and Implementation of a Micro Unmanned Quadrotor System. <i>Unmanned Systems</i> , <b>2014</b> , 02, 121-141	3	21
92	Multirate-Based Composite Controller Design of Piezoelectric Actuators for High-Bandwidth and Precision Tracking. <i>IEEE Transactions on Control Systems Technology</i> , <b>2014</b> , 22, 816-821	4.8	7
91	Explicit model identification and control of a micro aerial vehicle <b>2014</b> ,		1

90	On computation of stabilizing loop gain and delay ranges for bi-proper delay systems. <i>ISA Transactions</i> , <b>2014</b> , 53, 1705-15	5.5	3
89	Frequency-domain L <sub>2</sub> -stability conditions for time-varying linear and nonlinear MIMO systems. <i>Control Theory and Technology</i> , <b>2014</b> , 12, 13-34	1	5
88	Robust adaptive output feedback control of a class of discrete-time nonlinear systems with nonlinear uncertainties and unknown control directions. <i>International Journal of Robust and Nonlinear Control</i> , <b>2013</b> , 23, 1472-1495	3.6	18
87	Integrated servo-mechanical design of high-performance mechatronics using generalized KYP Lemma. <i>Microsystem Technologies</i> , <b>2013</b> , 19, 1549-1557	1.7	5
86	Aliased Narrow-Band Disturbance Rejection Using Phase-Stabilization Above Nyquist Frequency. <i>IEEE Transactions on Magnetics</i> , <b>2013</b> , 49, 2693-2696	2	2
85	Continuous critic learning for robot control in physical human-robot interaction <b>2013</b> ,		6
84	Design and Implementation of a TakagiSugeno-Type Fuzzy Logic Controller on a Two-Wheeled Mobile Robot. <i>IEEE Transactions on Industrial Electronics</i> , <b>2013</b> , 60, 5717-5728	8.9	73
83	Computation delay compensation for real time implementation of robust model predictive control. <i>Journal of Process Control</i> , <b>2013</b> , 23, 1342-1349	3.9	9
82	Development of an Approach Toward Comprehensive Identification of Hysteretic Dynamics in Piezoelectric Actuators. <i>IEEE Transactions on Control Systems Technology</i> , <b>2013</b> , 21, 1834-1845	4.8	37
81	Neural networks impedance control of robots interacting with environments. <i>IET Control Theory and Applications</i> , <b>2013</b> , 7, 1509-1519	2.5	20
80	Region tracking control for multi-agent systems with high-order dynamics <b>2013</b> ,		2
79	Convex separable parametrization in integrated servo-mechanical design for high-performance mechatronics <b>2013</b> ,		4
78	Platform design and mathematical modeling of an ultralight quadrotor micro aerial vehicle <b>2013</b> ,		7
77	Identification of Unknown Parameters for a Class of Two-Level Quantum Systems. <i>IEEE Transactions on Automatic Control</i> , <b>2013</b> , 58, 1805-1810	5.9	9
76	A smooth hybrid symbolic control for the formation of UAVs over a partitioned space <b>2013</b> ,		4
75	Fault Diagnosis and Fault-Tolerant Control in Linear Drives Using the Kalman Filter. <i>IEEE Transactions on Industrial Electronics</i> , <b>2012</b> , 59, 4285-4292	8.9	81
74	Identification and compensation of hysteretic dynamics of piezoelectric actuators for accurate and fast scanning <b>2012</b> ,		1
73	Sufficient and necessary conditions for the stability of second-order switched linear systems under arbitrary switching. <i>International Journal of Control</i> , <b>2012</b> , 85, 1977-1995	1.5	15

72	Design and mathematical modeling of a 4-standard-propeller (4SP) quadrotor <b>2012</b> ,		18
71	Integral Resonant Control for Suppression of Micro-Actuator Resonance in Dual Stage Actuator. <i>IEEE Transactions on Magnetics</i> , <b>2012</b> , 48, 4614-4617	2	1
70	Computation delay compensation for real time implementation of robust model predictive control <b>2012</b> ,		3
69	Adaptive Friction Compensation With a Dynamical Friction Model. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2011</b> , 16, 133-140	5.5	71
68	Adaptive Neural Network Control of Hard Disk Drives With Hysteresis Friction Nonlinearity. <i>IEEE Transactions on Control Systems Technology</i> , <b>2011</b> , 19, 351-358	4.8	26
67	Feedback stabilization for planar switched linear systems with two subsystems under arbitrary switching <b>2011</b> ,		2
66	Allocating Resources in Multiagent Flowshops With Adaptive Auctions. <i>IEEE Transactions on Automation Science and Engineering</i> , <b>2011</b> , 8, 732-743	4.9	7
65	Identification and control of a two-level open quantum system <b>2011</b> ,		3
64	Identification and control of linear dynamics with input Preisach hysteresis <b>2010</b> ,		1
63	Identification and control of nonlinear systems using piecewise affine models <b>2010</b> ,		2
62	Identification of piecewise affine systems and nonlinear systems using multiple models <b>2010</b> ,		2
61	Adaptive control of a class of discrete-time MIMO nonlinear systems with uncertain couplings. <i>International Journal of Control</i> , <b>2010</b> , 83, 2120-2133	1.5	43
60	Identification and control of nonlinear systems via piecewise affine approximation <b>2010</b> ,		2
59	Compensation of hysteresis in piezoelectric actuator with iterative learning control. <i>Journal of Control Theory and Applications</i> , <b>2010</b> , 8, 176-180		9
58	Dynamic modeling and control of extracellular ATP concentration on vascular endothelial cells via shear stress modulation. <i>Journal of Control Theory and Applications</i> , <b>2010</b> , 8, 326-332		2
57	Adaptive dynamic surface control for a class of strict-feedback nonlinear systems with unknown backlash-like hysteresis <b>2009</b> ,		41
56	Adaptive control for parametric output feedback systems with output constraint <b>2009</b> ,		5
55	Adaptive asymptotic tracking control of a class of discrete-time nonlinear systems with parametric and nonparametric uncertainties <b>2009</b> ,		4

54	Semi-parametric adaptive control of discrete-time nonlinear systems <b>2009</b> ,		2
53	Adaptive control of a class of strict-feedback discrete-time nonlinear systems with unknown control gains and preceded by hysteresis <b>2009</b> ,		5
52	Decentralized supervisory control: Nondeterministic transitions versus deterministic moves <b>2009</b> ,		1
51	A general framework for least-squares based identification of time-varying system using multiple models <b>2009</b> ,		4
50	Decentralized adaptive control of a class of discrete-time multi-agent systems for hidden leader following problem <b>2009</b> ,		10
49	Improved disturbance rejection with online adaptive pole-zero compensation on a $\mathbb{E}$ shaped PZT active suspension. <i>Microsystem Technologies</i> , <b>2009</b> , 15, 1499-1508	1.7	7
48	Predictive Ratio Control for Interacting Processes. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2009</b> , 48, 10515-10521	3.9	2
47	Developments in hybrid modeling and control of Unmanned Aerial Vehicles <b>2009</b> ,		2
46	Text extraction from images captured via mobile and digital devices <b>2009</b> ,		1
45	Compensation of hysteresis in piezoelectric actuator with iterative learning control <b>2009</b> ,		1
44	Adaptive Sliding-Mode Control of Piezoelectric Actuators. <i>IEEE Transactions on Industrial Electronics</i> , <b>2009</b> , 56, 3514-3522	8.9	55
43	A sliding mode control scheme for an underactuated unicycle <b>2009</b> ,		1
42	EXISTENCE ANALYSIS FOR LIMIT CYCLES OF RELAY FEEDBACK SYSTEMS. <i>Asian Journal of Control</i> , <b>2008</b> , 6, 428-431	1.7	1
41	Forecast Forex with ANN Using Fundamental Data <b>2008</b> ,		10
40	Stable adaptive neural network control of MIMO nonaffine nonlinear discrete-time systems <b>2008</b> ,		1
39	$\mathcal{H}_{\infty}$ Filter Design for Nonlinear Systems With Time-Delay Through TS Fuzzy Model Approach. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2008</b> , 16, 739-746	8.3	103
38	Controllability of Multi-agent Systems with Switching Topology <b>2008</b> ,		9
37	A graph theory based characterization of controllability for multi-agent systems with fixed topology <b>2008</b> ,		15

36	Adaptive neural control for uncertain nonlinear systems in pure-feedback form with hysteresis input <b>2008</b> ,		6
35	Adaptive model reference control of a class of MIMO discrete-time systems with compensation of nonparametric uncertainty <b>2008</b> ,		5
34	Adaptive neural control of SISO non-affine nonlinear time-delay systems with unknown hysteresis input <b>2008</b> ,		2
33	Design, Modeling, and Control of Piezoelectric Actuators for Intracytoplasmic Sperm Injection. <i>IEEE Transactions on Control Systems Technology</i> , <b>2007</b> , 15, 879-890	4.8	49
32	Enhanced disturbance suppression in sampled-data systems and its application to high density data storage servos. <i>Microsystem Technologies</i> , <b>2007</b> , 13, 911-921	1.7	2
31	Hard Disk Drives Control in Mobile Applications. <i>Journal of Systems Science and Complexity</i> , <b>2007</b> , 20, 215-224	1	8
30	Fuzzy Weighting-Dependent Approach to $H_{\infty}$ Filter Design for Time-Delay Fuzzy Systems. <i>IEEE Transactions on Signal Processing</i> , <b>2007</b> , 55, 2746-2751	4.8	88
29	Piezoelectric Actuator for Intra-Cytoplasmic Sperm Injection. <i>Recent Patents on Engineering</i> , <b>2007</b> , 1, 147-152	0.3	1
28	Adaptive Control of Mechanical Systems Using Neural Networks. <i>IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews</i> , <b>2007</b> , 37, 897-903		6
27	A Smith-Like Control Design for Performance Enhancement of Systems with RHP Zeros. <i>Journal of Chemical Engineering of Japan</i> , <b>2007</b> , 40, 128-138	0.8	
26	Line Tracking of the Gyrobot - a Gyroscopically Stabilized Single-Wheeled Robot <b>2006</b> ,		7
25	A less conservative robust stability test for linear uncertain time-delay systems. <i>IEEE Transactions on Automatic Control</i> , <b>2006</b> , 51, 87-91	5.9	184
24	Iterative learning control for systems with input deadzone. <i>IEEE Transactions on Automatic Control</i> , <b>2005</b> , 50, 1455-1459	5.9	31
23	Robust normalization and stabilization of Uncertain Descriptor systems with norm-Bounded Perturbations. <i>IEEE Transactions on Automatic Control</i> , <b>2005</b> , 50, 515-520	5.9	69
22	On nonlinear sliding mode control for a class of nonlinear cascade systems. <i>International Journal of Systems Science</i> , <b>2005</b> , 36, 983-992	2.3	12
21	Robust adaptive control for a class of perturbed strict-feedback nonlinear systems <b>2004</b> ,		4
20	Stability criteria and bounds for limit cycles of relay feedback systems. <i>Dynamical Systems</i> , <b>2004</b> , 19, 161-170		3
19	Analysis and comparison of iterative learning control schemes. <i>Engineering Applications of Artificial Intelligence</i> , <b>2004</b> , 17, 675-686	7.2	32



18	Fuzzy behavior-based control of mobile robots. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2004</b> , 12, 559-564	8.3	47
17	An improvement on stable adaptive control for a class of nonlinear systems. <i>IEEE Transactions on Automatic Control</i> , <b>2004</b> , 49, 1398-1403	5.9	26
16	Relay Feedback: A Complete Analysis for First-Order Systems. <i>Industrial &amp; Engineering Chemistry Research</i> , <b>2004</b> , 43, 8400-8402	3.9	20
15	A modular control scheme for PMSM speed control with pulsating torque minimization. <i>IEEE Transactions on Industrial Electronics</i> , <b>2004</b> , 51, 526-536	8.9	124
14	Decentralized control design for large-scale systems with strong interconnections using neural networks. <i>IEEE Transactions on Automatic Control</i> , <b>2003</b> , 48, 805-810	5.9	89
13	Internet-based monitoring of distributed control systems-An undergraduate experiment. <i>IEEE Transactions on Education</i> , <b>2002</b> , 45, 128-134	2.1	24
12	New interpolation method for quadrature encoder signals. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2002</b> , 51, 1073-1079	5.2	72
11	Output tracking control of MIMO fuzzy nonlinear systems using variable structure control approach. <i>IEEE Transactions on Fuzzy Systems</i> , <b>2002</b> , 10, 686-697	8.3	62
10	Local stability of limit cycles for time-delay relay-feedback systems. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , <b>2002</b> , 49, 1870-1875		10
9	Robust PI controller design for nonlinear systems via fuzzy modeling approach. <i>IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans</i> , <b>2001</b> , 31, 666-675		40
8	Micro-positioning of linear-piezoelectric motors based on a learning nonlinear PID controller. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2001</b> , 6, 428-436	5.5	76
7	Nanoposition sensing and control in HDD dual-stage servo systems		9
6	Robust adaptive control of nonlinear systems with unknown time delays		2
5	A multirate iterative learning control scheme		1
4	On the design of multivariable PID controllers via LMI approach		1
3	Application of evolutionary artificial potential field in robot soccer system		16
2	A parameter optimization approach to solving quasi-LMI problems		2
1	Robust PI controller design for nonlinear systems via fuzzy modelling approach		2

