# Tong Heng Lee

## List of Publications by Citations

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| **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 | Design and Implementation of Integral Sliding-Mode Control on an Underactuated Two-Wheeled Mobile Robot. *IEEE Transactions on Industrial Electronics*, **2014**, 61, 3671-3681 | 8.9 | 198 |
| 142 | A less conservative robust stability test for linear uncertain time-delay systems. *IEEE Transactions on Automatic Control*, **2006**, 51, 87-91 | 5.9 | 184 |
| 141 | A modular control scheme for PMSM speed control with pulsating torque minimization. *IEEE Transactions on Industrial Electronics*, **2004**, 51, 526-536 | 8.9 | 124 |
| 140 | $H_{infty}$ Filter Design for Nonlinear Systems With Time-Delay Through TS Fuzzy Model Approach. *IEEE Transactions on Fuzzy Systems*, **2008**, 16, 739-746 | 8.3 | 103 |
| 139 | Decentralized control design for large-scale systems with strong interconnections using neural networks. *IEEE Transactions on Automatic Control*, **2003**, 48, 805-810 | 5.9 | 89 |
| 138 | Fuzzy Weighting-Dependent Approach to $H_{infty}$ Filter Design for Time-Delay Fuzzy Systems. *IEEE Transactions on Signal Processing*, **2007**, 55, 2746-2751 | 4.8 | 88 |
| 137 | Fault Diagnosis and Fault-Tolerant Control in Linear Drives Using the Kalman Filter. *IEEE Transactions on Industrial Electronics*, **2012**, 59, 4285-4292 | 8.9 | 81 |
| 136 | Micro-positioning of linear-piezoelectric motors based on a learning nonlinear PID controller. *IEEE/ASME Transactions on Mechatronics*, **2001**, 6, 428-436 | 5.5 | 76 |
| 135 | Design and Implementation of a TakagiSugeno-Type Fuzzy Logic Controller on a Two-Wheeled Mobile Robot. *IEEE Transactions on Industrial Electronics*, **2013**, 60, 5717-5728 | 8.9 | 73 |
| 134 | New interpolation method for quadrature encoder signals. *IEEE Transactions on Instrumentation and Measurement*, **2002**, 51, 1073-1079 | 5.2 | 72 |
| 133 | Adaptive Friction Compensation With a Dynamical Friction Model. *IEEE/ASME Transactions on Mechatronics*, **2011**, 16, 133-140 | 5.5 | 71 |
| 132 | Robust normalization and stabilization of Uncertain Descriptor systems with norm-Bounded Perturbations. *IEEE Transactions on Automatic Control*, **2005**, 50, 515-520 | 5.9 | 69 |
| 131 | Output tracking control of MIMO fuzzy nonlinear systems using variable structure control approach. *IEEE Transactions on Fuzzy Systems*, **2002**, 10, 686-697 | 8.3 | 62 |
| 130 | Adaptive Sliding-Mode Control of Piezoelectric Actuators. *IEEE Transactions on Industrial Electronics*, **2009**, 56, 3514-3522 | 8.9 | 55 |
| 129 | Design, Modeling, and Control of Piezoelectric Actuators for Intracytoplasmic Sperm Injection. *IEEE Transactions on Control Systems Technology*, **2007**, 15, 879-890 | 4.8 | 49 |
| 128 | Fuzzy behavior-based control of mobile robots. *IEEE Transactions on Fuzzy Systems*, **2004**, 12, 559-564 | 8.3 | 47 |
| 127 | Adaptive Control of Robotic Manipulators With Unified Motion Constraints. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, **2017**, 47, 184-194 | 7.3 | 43 |

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| 126 | Adaptive control of a class of discrete-time MIMO nonlinear systems with uncertain couplings. *International Journal of Control*, **2010**, 83, 2120-2133 | 1.5 | 43 |
| 125 | Adaptive dynamic surface control for a class of strict-feedback nonlinear systems with unknown backlash-like hysteresis **2009**, | | 41 |
| 124 | Robust PI controller design for nonlinear systems via fuzzy modeling approach. *IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans*, **2001**, 31, 666-675 | | 40 |
| 123 | Power-Efficient Interrupt-Driven Algorithms for Fall Detection and Classification of Activities of Daily Living. *IEEE Sensors Journal*, **2015**, 15, 1377-1387 | 4 | 39 |
| 122 | Development of an Approach Toward Comprehensive Identification of Hysteretic Dynamics in Piezoelectric Actuators. *IEEE Transactions on Control Systems Technology*, **2013**, 21, 1834-1845 | 4.8 | 37 |
| 121 | Analysis and comparison of iterative learning control schemes. *Engineering Applications of Artificial Intelligence*, **2004**, 17, 675-686 | 7.2 | 32 |
| 120 | Iterative learning control for systems with input deadzone. *IEEE Transactions on Automatic Control*, **2005**, 50, 1455-1459 | 5.9 | 31 |
| 119 | Adaptive Neural Network Control of Hard Disk Drives With Hysteresis Friction Nonlinearity. *IEEE Transactions on Control Systems Technology*, **2011**, 19, 351-358 | 4.8 | 26 |
| 118 | An improvement on stable adaptive control for a class of nonlinear systems. *IEEE Transactions on Automatic Control*, **2004**, 49, 1398-1403 | 5.9 | 26 |
| 117 | Fixed-Time-Synchronized Consensus Control of Multiagent Systems. *IEEE Transactions on Control of Network Systems*, **2021**, 8, 89-98 | 4 | 25 |
| 116 | Internet-based monitoring of distributed control systems-An undergraduate experiment. *IEEE Transactions on Education*, **2002**, 45, 128-134 | 2.1 | 24 |
| 115 | Role playing learning for socially concomitant mobile robot navigation. *CAAI Transactions on Intelligence Technology*, **2018**, 3, 49-58 | 9.7 | 22 |
| 114 | Systematic Design and Implementation of a Micro Unmanned Quadrotor System. *Unmanned Systems*, **2014**, 02, 121-141 | 3 | 21 |
| 113 | Neural networks impedance control of robots interacting with environments. *IET Control Theory and Applications*, **2013**, 7, 1509-1519 | 2.5 | 20 |
| 112 | Relay Feedback: A Complete Analysis for First-Order Systems. *Industrial &amp; Engineering Chemistry Research*, **2004**, 43, 8400-8402 | 3.9 | 20 |
| 111 | Robust adaptive output feedback control of a class of discrete-time nonlinear systems with nonlinear uncertainties and unknown control directions. *International Journal of Robust and Nonlinear Control*, **2013**, 23, 1472-1495 | 3.6 | 18 |
| 110 | Design and mathematical modeling of a 4-standard-propeller (4SP) quadrotor **2012**, | | 18 |
| 109 | Unsupervised Cross-domain Fault Diagnosis Using Feature Representation Alignment Networks for Rotating Machinery. *IEEE/ASME Transactions on Mechatronics*, **2020**, 1-1 | 5.5 | 17 |

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| 108 | Application of evolutionary artificial potential field in robot soccer system | | 16 |
| 107 | Cooperative Circumnavigation Control of Networked Microsatellites. *IEEE Transactions on Cybernetics*, **2020**, 50, 4550-4555 | 10.2 | 16 |
| 106 | . *IEEE/ASME Transactions on Mechatronics*, **2020**, 25, 1961-1970 | 5.5 | 15 |
| 105 | Sufficient and necessary conditions for the stability of second-order switched linear systems under arbitrary switching. *International Journal of Control*, **2012**, 85, 1977-1995 | 1.5 | 15 |
| 104 | A graph theory based characterization of controllability for multi-agent systems with fixed topology **2008**, | | 15 |
| 103 | . *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, **2021**, 1-14 | 7.3 | 15 |
| 102 | . *IEEE Transactions on Automatic Control*, **2021**, 66, 5554-5560 | 5.9 | 13 |
| 101 | On nonlinear H ∞ sliding mode control for a class of nonlinear cascade systems. *International Journal of Systems Science*, **2005**, 36, 983-992 | 2.3 | 12 |
| 100 | Active vibration isolation based on model reference adaptive control. *International Journal of Systems Science*, **2014**, 45, 97-108 | 2.3 | 11 |
| 99 | Geometric Map-Assisted Localization for Mobile Robots Based on Uniform-Gaussian Distribution. *IEEE Robotics and Automation Letters*, **2017**, 2, 789-795 | 4.2 | 10 |
| 98 | Decentralized adaptive control of a class of discrete-time multi-agent systems for hidden leader following problem **2009**, | | 10 |
| 97 | Forecast Forex with ANN Using Fundamental Data **2008**, | | 10 |
| 96 | Local stability of limit cycles for time-delay relay-feedback systems. *IEEE Transactions on Circuits and Systems Part 1: Regular Papers*, **2002**, 49, 1870-1875 | | 10 |
| 95 | Simultaneous-Arrival-to-Origin Convergence: Sliding-Mode Control through the Norm-Normalized Sign Function. *IEEE Transactions on Automatic Control*, **2021**, 1-1 | 5.9 | 10 |
| 94 | Trajectory Generation by Chance-Constrained Nonlinear MPC With Probabilistic Prediction. *IEEE Transactions on Cybernetics*, **2021**, 51, 3616-3629 | 10.2 | 10 |
| 93 | Computation delay compensation for real time implementation of robust model predictive control. *Journal of Process Control*, **2013**, 23, 1342-1349 | 3.9 | 9 |
| 92 | Identification of Unknown Parameters for a Class of Two-Level Quantum Systems. *IEEE Transactions on Automatic Control*, **2013**, 58, 1805-1810 | 5.9 | 9 |
| 91 | Compensation of hysteresis in piezoelectric actuator with iterative learning control. *Journal of Control Theory and Applications*, **2010**, 8, 176-180 | | 9 |

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| 90 | Controllability of Multi-agent Systems with Switching Topology **2008**, | | 9 |
| 89 | Nanoposition sensing and control in HDD dual-stage servo systems | | 9 |
| 88 | Hard Disk Drives Control in Mobile Applications. *Journal of Systems Science and Complexity*, **2007**, 20, 215-224 | 1 | 8 |
| 87 | Data-driven identification and control of nonlinear systems using multiple NARMA-L2 models. *International Journal of Robust and Nonlinear Control*, **2018**, 28, 3806-3833 | 3.6 | 7 |
| 86 | Multirate-Based Composite Controller Design of Piezoelectric Actuators for High-Bandwidth and Precision Tracking. *IEEE Transactions on Control Systems Technology*, **2014**, 22, 816-821 | 4.8 | 7 |
| 85 | Platform design and mathematical modeling of an ultralight quadrotor micro aerial vehicle **2013**, | | 7 |
| 84 | Improved disturbance rejection with online adaptive pole-zero compensation on a Ʃ-shaped PZT active suspension. *Microsystem Technologies*, **2009**, 15, 1499-1508 | 1.7 | 7 |
| 83 | Allocating Resources in Multiagent Flowshops With Adaptive Auctions. *IEEE Transactions on Automation Science and Engineering*, **2011**, 8, 732-743 | 4.9 | 7 |
| 82 | Line Tracking of the Gyrobot - a Gyroscopically Stabilized Single-Wheeled Robot **2006**, | | 7 |
| 81 | Disturbance Compensation by Reference Profile Alteration With Application to Tray Indexing. *IEEE Transactions on Industrial Electronics*, **2019**, 66, 9406-9416 | 8.9 | 6 |
| 80 | Continuous critic learning for robot control in physical human-robot interaction **2013**, | | 6 |
| 79 | Adaptive neural control for uncertain nonlinear systems in pure-feedback form with hysteresis input **2008**, | | 6 |
| 78 | Adaptive Control of Mechanical Systems Using Neural Networks. *IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews*, **2007**, 37, 897-903 | | 6 |
| 77 | Infinite-Horizon Optimal Control of Switched Boolean Control Networks With Average Cost: An Efficient Graph-Theoretical Approach. *IEEE Transactions on Cybernetics*, **2020**, PP, | 10.2 | 6 |
| 76 | Iterative Super-Twisting Sliding Mode Control for Tray Indexing System With Unknown Dynamics. *IEEE Transactions on Industrial Electronics*, **2021**, 68, 9855-9865 | 8.9 | 6 |
| 75 | . *IEEE/ASME Transactions on Mechatronics*, **2021**, 1-1 | 5.5 | 6 |
| 74 | Integrated servo-mechanical design of high-performance mechatronics using generalized KYP Lemma. *Microsystem Technologies*, **2013**, 19, 1549-1557 | 1.7 | 5 |
| 73 | Frequency-domain L 2-stability conditions for time-varying linear and nonlinear MIMO systems. *Control Theory and Technology*, **2014**, 12, 13-34 | 1 | 5 |

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| 72 | Adaptive control for parametric output feedback systems with output constraint **2009**, | | 5 |
| 71 | Adaptive control of a class of strict-feedback discrete-time nonlinear systems with unknown control gains and preceded by hysteresis **2009**, | | 5 |
| 70 | Adaptive model reference control of a class of MIMO discrete-time systems with compensation of nonparametric uncertainty **2008**, | | 5 |
| 69 | On Robust Stability and Performance With a Fixed-Order Controller Design for Uncertain Systems. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, **2021**, 1-13 | 7.3 | 5 |
| 68 | Efficient Boolean Modeling of Gene Regulatory Networks via Random Forest Based Feature Selection and Best-Fit Extension **2018**, | | 5 |
| 67 | Convex separable parametrization in integrated servo-mechanical design for high-performance mechatronics **2013**, | | 4 |
| 66 | A smooth hybrid symbolic control for the formation of UAVs over a partitioned space **2013**, | | 4 |
| 65 | Adaptive asymptotic tracking control of a class of discrete-time nonlinear systems with parametric and nonparametric uncertainties **2009**, | | 4 |
| 64 | A general framework for least-squares based identification of time-varying system using multiple models **2009**, | | 4 |
| 63 | Robust adaptive control for a class of perturbed strict-feedback nonlinear systems **2004**, | | 4 |
| 62 | HLT*: Real-time and Any-angle Path Planning in 3D Environment **2019**, | | 4 |
| 61 | Convex Inner Approximation for Mixed H2/H-Infinity Control with Application to a 2-DoF Flexure-Based Nano-Positioning System. *IEEE Transactions on Industrial Electronics*, **2021**, 1-1 | 8.9 | 4 |
| 60 | GPS/odometry/map fusion for vehicle positioning using potential function. *Autonomous Robots*, **2018**, 42, 99-110 | 3 | 4 |
| 59 | Integrated Servo-Mechanical Design of Robust Mechatronics Based on Ambiguous Chance Constraints. *IEEE Transactions on Control Systems Technology*, **2015**, 23, 2449-2456 | 4.8 | 3 |
| 58 | On computation of stabilizing loop gain and delay ranges for bi-proper delay systems. *ISA Transactions*, **2014**, 53, 1705-15 | 5.5 | 3 |
| 57 | Identification and control of a two-level open quantum system **2011**, | | 3 |
| 56 | Computation delay compensation for real time implementation of robust model predictive control **2012**, | | 3 |
| 55 | Stability criteria and bounds for limit cycles of relay feedback systems. *Dynamical Systems*, **2004**, 19, 161-170 | | 3 |

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|---|---|---|---|
| 54 | Adaptive control for robot navigation in human environments based on social force model **2016**, | | 3 |
| 53 | Finite-Horizon Optimal Control of Boolean Control Networks: A Unified Graph-Theoretical Approach. *IEEE Transactions on Neural Networks and Learning Systems*, **2020**, PP, | 10.3 | 2 |
| 52 | Aliased Narrow-Band Disturbance Rejection Using Phase-Stabilization Above Nyquist Frequency. *IEEE Transactions on Magnetics*, **2013**, 49, 2693-2696 | 2 | 2 |
| 51 | Wide area surveillance of urban environments using multiple Mini-VTOL UAVs **2015**, | | 2 |
| 50 | Region tracking control for multi-agent systems with high-order dynamics **2013**, | | 2 |
| 49 | Identification and control of nonlinear systems using piecewise affine models **2010**, | | 2 |
| 48 | Identification of piecewise affine systems and nonlinear systems using multiple models **2010**, | | 2 |
| 47 | Identification and control of nonlinear systems via piecewise affine approximation **2010**, | | 2 |
| 46 | Feedback stabilization for planar switched linear systems with two subsystems under arbitrary switching **2011**, | | 2 |
| 45 | Semi-parametric adaptive control of discrete-time nonlinear systems **2009**, | | 2 |
| 44 | Predictive Ratio Control for Interacting Processes. *Industrial &amp; Engineering Chemistry Research*, **2009**, 48, 10515-10521 | 3.9 | 2 |
| 43 | Developments in hybrid modeling and control of Unmanned Aerial Vehicles **2009**, | | 2 |
| 42 | Dynamic modeling and control of extracellular ATP concentration on vascular endothelial cells via shear stress modulation. *Journal of Control Theory and Applications*, **2010**, 8, 326-332 | | 2 |
| 41 | Adaptive neural control of SISO non-affine nonlinear time-delay systems with unknown hysteresis input **2008**, | | 2 |
| 40 | Enhanced disturbance suppression in sampled-data systems and its application to high density data storage servos. *Microsystem Technologies*, **2007**, 13, 911-921 | 1.7 | 2 |
| 39 | Robust adaptive control of nonlinear systems with unknown time delays | | 2 |
| 38 | A parameter optimization approach to solving quasi-LMI problems | | 2 |
| 37 | Semi-Proximal ADMM for Model Predictive Control Problem with Application to a UAV System **2020**, | | 2 |

| 36 | Robust PI controller design for nonlinear systems via fuzzy modelling approach | | 2 |
|---|---|---|---|
| 35 | Autonomous task planning and acting for micro aerial vehicles **2019**, | | 2 |
| 34 | Set Invariance and Optimal Set Stabilization of Boolean Control Networks: A Graphical Approach. *IEEE Transactions on Control of Network Systems*, **2021**, 8, 400-412 | 4 | 2 |
| 33 | . *IEEE Transactions on Industrial Electronics*, **2021**, 1-1 | 8.9 | 2 |
| 32 | . *IEEE Transactions on Intelligent Transportation Systems*, **2021**, 1-12 | 6.1 | 2 |
| 31 | Integrated servo-mechanical design of robust mechatronics based on low-order moments and support **2014**, | | 1 |
| 30 | Explicit model identification and control of a micro aerial vehicle **2014**, | | 1 |
| 29 | Identification and compensation of hysteretic dynamics of piezoelectric actuators for accurate and fast scanning **2012**, | | 1 |
| 28 | Identification and control of linear dynamics with input Preisach hysteresis **2010**, | | 1 |
| 27 | Decentralized supervisory control: Nondeterministic transitions versus deterministic moves **2009**, | | 1 |
| 26 | Integral Resonant Control for Suppression of Micro-Actuator Resonance in Dual Stage Actuator. *IEEE Transactions on Magnetics*, **2012**, 48, 4614-4617 | 2 | 1 |
| 25 | Text extraction from images captured via mobile and digital devices **2009**, | | 1 |
| 24 | Compensation of hysteresis in piezoelectric actuator with iterative learning control **2009**, | | 1 |
| 23 | A sliding mode control scheme for an underactuated unicycle **2009**, | | 1 |
| 22 | EXISTENCE ANALYSIS FOR LIMIT CYCLES OF RELAY FEEDBACK SYSTEMS. *Asian Journal of Control*, **2008**, 6, 428-431 | 1.7 | 1 |
| 21 | Stable adaptive neural network control of MIMO nonaffine nonlinear discrete-time systems **2008**, | | 1 |
| 20 | Piezoelectric Actuator for Intra-Cytoplasmic Sperm Injection. *Recent Patents on Engineering*, **2007**, 1, 147-152 | 0.3 | 1 |
| 19 | A multirate iterative learning control scheme | | 1 |

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| 18 | On the design of multivariable PID controllers via LMI approach | | 1 |
| 17 | Time-Synchronized Control for Disturbed Systems **2022**, 61-99 | | 1 |
| 16 | Online Optimal Power Scheduling of a Microgrid via Imitation Learning. *IEEE Transactions on Smart Grid*, **2021**, 1-1 | 10.7 | 1 |
| 15 | Learning Asynchronous Boolean Networks From Single-Cell Data Using Multiobjective Cooperative Genetic Programming. *IEEE Transactions on Cybernetics*, **2020**, PP, | 10.2 | 1 |
| 14 | Long-term cooperative tracking using multiple unmanned aerial vehicles **2016**, | | 1 |
| 13 | Teaching of Automation and Control Engineering Practice - A Case Study **2018**, | | 1 |
| 12 | Hybrid Active-Passive Robust Control Framework of a Flexure-Joint Dual-Drive Gantry Robot for High-Precision Contouring Tasks. *IEEE Transactions on Industrial Electronics*, **2022**, 1-1 | 8.9 | 1 |
| 11 | Data-Driven Tuning Method for LQR Based Optimal PID Controller **2019**, | | 0 |
| 10 | Adaptive Robust Impedance Control for an Ear Surgical Device with Soft Interaction. *IEEE/ASME Transactions on Mechatronics*, **2021**, 1-1 | 5.5 | 0 |
| 9 | Sequential Convex Programming for Collaboration of Connected and Automated Vehicles. *IEEE Transactions on Intelligent Vehicles*, **2021**, 1-1 | 5 | 0 |
| 8 | Practical Time-Synchronized Attitude Control for Disturbed Spacecraft **2022**, 221-250 | | |
| 7 | Time-Synchronized Spacecraft Control in Rendezvous and Docking **2022**, 189-220 | | |
| 6 | Time-Synchronized Stability **2022**, 11-41 | | |
| 5 | Time-Synchronized Consensus of Network Systems **2022**, 165-187 | | |
| 4 | Fixed-Time-Synchronized Control with Settling Time Estimation **2022**, 133-163 | | |
| 3 | Time-Synchronized Sliding Modes **2022**, 43-60 | | |
| 2 | Fixed-Time-Synchronized Control with Singularity Avoidance **2022**, 101-131 | | |
| 1 | A Smith-Like Control Design for Performance Enhancement of Systems with RHP Zeros. *Journal of Chemical Engineering of Japan*, **2007**, 40, 128-138 | 0.8 | |