

Qiang Shen

List of Publications by Citations

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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.

164
papers

2,980
citations

28
h-index

49
g-index

228
ext. papers

3,946
ext. citations

4.1
avg, IF

5.67
L-index

#	Paper	IF	Citations
164	Linear Phase Lead Compensation Repetitive Control of a CVCF PWM Inverter. <i>IEEE Transactions on Industrial Electronics</i> , 2008 , 55, 1595-1602	8.9	148
163	DOB-Based Neural Control of Flexible Hypersonic Flight Vehicle Considering Wind Effects. <i>IEEE Transactions on Industrial Electronics</i> , 2017 , 64, 8676-8685	8.9	143
162	Integral-Type Sliding Mode Fault-Tolerant Control for Attitude Stabilization of Spacecraft. <i>IEEE Transactions on Control Systems Technology</i> , 2015 , 23, 1131-1138	4.8	140
161	Modeling and Analysis of Skidding and Slipping in Wheeled Mobile Robots: Control Design Perspective. <i>IEEE Transactions on Robotics</i> , 2008 , 24, 676-687	6.5	127
160	Digital repetitive learning controller for three-phase CVCF PWM inverter. <i>IEEE Transactions on Industrial Electronics</i> , 2001 , 48, 820-830	8.9	113
159	Frequency Adaptive Selective Harmonic Control for Grid-Connected Inverters. <i>IEEE Transactions on Power Electronics</i> , 2015 , 30, 3912-3924	7.2	103
158	Learning impedance control for robotic manipulators. <i>IEEE Transactions on Automation Science and Engineering</i> , 1998 , 14, 452-465		86
157	On D-type and P-type ILC designs and anticipatory approach. <i>International Journal of Control</i> , 2000 , 73, 890-901	1.5	85
156	Multirate Repetitive Control for PWM DC/AC Converters. <i>IEEE Transactions on Industrial Electronics</i> , 2014 , 61, 2883-2890	8.9	77
155	Decentralized sliding-mode control for attitude synchronization in spacecraft formation. <i>International Journal of Robust and Nonlinear Control</i> , 2013 , 23, 1183-1197	3.6	76
154	Direct neural discrete control of hypersonic flight vehicle. <i>Nonlinear Dynamics</i> , 2012 , 70, 269-278	5	71
153	A Generic Digital n th-Order Harmonic Repetitive Control Scheme for PWM Converters. <i>IEEE Transactions on Industrial Electronics</i> , 2014 , 61, 1516-1527	8.9	62
152	Robust Control Allocation for Spacecraft Attitude Tracking Under Actuator Faults. <i>IEEE Transactions on Control Systems Technology</i> , 2017 , 25, 1068-1075	4.8	61
151	Inertia-free fault-tolerant spacecraft attitude tracking using control allocation. <i>Automatica</i> , 2015 , 62, 114-121	5.7	60
150	Causality Assignment and Model Approximation for Hybrid Bond Graph: Fault Diagnosis Perspectives. <i>IEEE Transactions on Automation Science and Engineering</i> , 2010 , 7, 570-580	4.9	56
149	Attitude Tracking Control of Rigid Spacecraft With Actuator Misalignment and Fault. <i>IEEE Transactions on Control Systems Technology</i> , 2013 , 21, 2360-2366	4.8	54
148	Quantitative Hybrid Bond Graph-Based Fault Detection and Isolation. <i>IEEE Transactions on Automation Science and Engineering</i> , 2010 , 7, 558-569	4.9	53

147	Full-state tracking and internal dynamics of nonholonomic wheeled mobile robots. <i>IEEE/ASME Transactions on Mechatronics</i> , 2003 , 8, 203-214	5.5	53
146	A General Parallel Structure Repetitive Control Scheme for Multiphase DC/AC PWM Converters. <i>IEEE Transactions on Power Electronics</i> , 2013 , 28, 3980-3987	7.2	51
145	High Precision Satellite Attitude Tracking Control via Iterative Learning Control. <i>Journal of Guidance, Control, and Dynamics</i> , 2015 , 38, 528-534	2.1	47
144	Closed-loop iterative learning control for non-linear systems with initial shifts. <i>International Journal of Adaptive Control and Signal Processing</i> , 2002 , 16, 515-538	2.8	40
143	Mode Identification of Hybrid Systems in the Presence of Fault. <i>IEEE Transactions on Industrial Electronics</i> , 2010 , 57, 1452-1467	8.9	39
142	Optimal Selective Harmonic Control for Power Harmonics Mitigation. <i>IEEE Transactions on Industrial Electronics</i> , 2015 , 62, 1220-1230	8.9	38
141	Model-Based Health Monitoring for a Vehicle Steering System With Multiple Faults of Unknown Types. <i>IEEE Transactions on Industrial Electronics</i> , 2014 , 61, 3574-3586	8.9	37
140	A Data-Driven Iterative Feedback Tuning Approach of ALINEA for Freeway Traffic Ramp Metering With PARAMICS Simulations. <i>IEEE Transactions on Industrial Informatics</i> , 2013 , 9, 2310-2317	11.9	36
139	Prognosis of Hybrid Systems With Multiple Incipient Faults: Augmented Global Analytical Redundancy Relations Approach. <i>IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans</i> , 2011 , 41, 540-551		33
138	Analysis of Nonlinear Discrete-Time Systems with Higher-Order Iterative Learning Control. <i>Journal of Dynamical and Control Systems</i> , 2001 , 11, 81-96		31
137	Rigid-Body Attitude Tracking Control Under Actuator Faults and Angular Velocity Constraints. <i>IEEE/ASME Transactions on Mechatronics</i> , 2018 , 23, 1338-1349	5.5	29
136	Model-Based Diagnosis and RUL Estimation of Induction Machines Under Interturn Fault. <i>IEEE Transactions on Industry Applications</i> , 2017 , 53, 2690-2701	4.3	27
135	Non-linear output feedback tracking control for AUVs in shallow wave disturbance condition. <i>International Journal of Control</i> , 2008 , 81, 1806-1823	1.5	27
134	Velocity-free fault-tolerant control allocation for flexible spacecraft with redundant thrusters. <i>International Journal of Systems Science</i> , 2015 , 46, 976-992	2.3	25
133	Cooperative Control of Multiple UAVs for Moving Source Seeking. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2014 , 74, 333-346	2.9	25
132	Decentralized sliding-mode control for spacecraft attitude synchronization under actuator failures. <i>Acta Astronautica</i> , 2014 , 105, 333-343	2.9	25
131	An Integrated Approach to Mode Tracking and Diagnosis of Hybrid Systems. <i>IEEE Transactions on Industrial Electronics</i> , 2014 , 61, 2024-2040	8.9	25
130	Electrochemical mechanical polishing technology: recent developments and future research and industrial needs. <i>International Journal of Advanced Manufacturing Technology</i> , 2016 , 86, 1909-1924	3.2	22

129	Zero Phase Learning Control Using Reversed Time Input Runs. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2005 , 127, 133-139	1.6	22
128	Hierarchical Probabilistic Fusion Framework for Matching and Merging of 3-D Occupancy Maps. <i>IEEE Sensors Journal</i> , 2018 , 18, 8933-8949	4	22
127	Iterative Learning Control Design for Uncertain Dynamic Systems with Delayed States. <i>Journal of Dynamical and Control Systems</i> , 2000 , 10, 341-357		21
126	Vision-Based Flexible LeaderFollower Formation Tracking of Multiple Nonholonomic Mobile Robots in Unknown Obstacle Environments. <i>IEEE Transactions on Control Systems Technology</i> , 2020 , 28, 1025-1033	4.8	20
125	Adaptive Neural Control of a Hypersonic Vehicle in Discrete Time. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2014 , 73, 219-231	2.9	19
124	A Novel Model for Fully Closed-Loop System of Hemispherical Resonator Gyroscope Under Force-to-Rebalance Mode. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2020 , 69, 9918-9930	5.2	19
123	A Method for Incipient Interturn Fault Detection and Severity Estimation of Induction Motors Under Inherent Asymmetry and Voltage Imbalance. <i>IEEE Transactions on Transportation Electrification</i> , 2017 , 3, 703-715	7.6	18
122	Anticipatory iterative learning control for nonlinear systems with arbitrary relative degree. <i>IEEE Transactions on Automatic Control</i> , 2001 , 46, 783-788	5.9	18
121	Polishing of uneven surfaces using industrial robots based on neural network and genetic algorithm. <i>International Journal of Advanced Manufacturing Technology</i> , 2017 , 93, 1463-1471	3.2	17
120	Time-optimal reorientation for rigid satellite with reaction wheels. <i>International Journal of Control</i> , 2012 , 85, 1452-1463	1.5	17
119	Trajectory planning for a four-wheel-steering vehicle		17
118	A Practical LeaderFollower Tracking Control Scheme for Multiple Nonholonomic Mobile Robots in Unknown Obstacle Environments. <i>IEEE Transactions on Control Systems Technology</i> , 2019 , 27, 1685-1693 ^{4.8}	4.8	17
117	Global stabilization for constrained robot motions with constraint uncertainties. <i>Robotica</i> , 1998 , 16, 171-179		16
116	RFS Collaborative Multivehicle SLAM: SLAM in Dynamic High-Clutter Environments. <i>IEEE Robotics and Automation Magazine</i> , 2014 , 21, 53-59	3.4	15
115	Simple LMI based learning control design. <i>Asian Journal of Control</i> , 2009 , 11, 74-77	1.7	15
114	Fault parameter estimation for hybrid systems using hybrid bond graph 2009 ,		15
113	Stability analysis of the equilibrium of a constrained mechanical system. <i>International Journal of Control</i> , 1994 , 60, 733-746	1.5	15
112	Unified robust zero-error tracking control of CVCF PWM converters. <i>IEEE Transactions on Circuits and Systems Part 1: Regular Papers</i> , 2002 , 49, 492-501		14

111	Motion Capability Analysis for Multiple Fixed-Wing UAV Formations With Speed and Heading Rate Constraints. <i>IEEE Transactions on Control of Network Systems</i> , 2020 , 7, 977-989	4	14
110	Cutoff-Frequency Phase-In Iterative Learning Control. <i>IEEE Transactions on Control Systems Technology</i> , 2009 , 17, 681-687	4.8	13
109	Integrated Estimation for Wheeled Mobile Robot posture, velocities, and wheel skidding perturbations. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , 2007 ,		13
108	Collaborative Semantic Understanding and Mapping Framework for Autonomous Systems. <i>IEEE/ASME Transactions on Mechatronics</i> , 2021 , 26, 978-989	5.5	13
107	A Multilevel Fusion System for Multirobot 3-D Mapping Using Heterogeneous Sensors. <i>IEEE Systems Journal</i> , 2020 , 14, 1341-1352	4.3	13
106	Attitude Stabilization Using Two Parallel Single-Gimbal Control Moment Gyroscopes. <i>Journal of Guidance, Control, and Dynamics</i> , 2019 , 42, 1353-1364	2.1	12
105	Adaptive walking control of biped robots using online trajectory generation method based on neural oscillators. <i>Journal of Bionic Engineering</i> , 2016 , 13, 572-584	2.7	12
104	Pseudo-downsampled iterative learning control. <i>International Journal of Robust and Nonlinear Control</i> , 2008 , 18, 1072-1088	3.6	12
103	Performance improvement of repetitive controlled PWM inverters: A phase-lead compensation solution. <i>International Journal of Circuit Theory and Applications</i> , 2008 , 38, n/a-n/a	2	12
102	A Novel Navigation Method for Autonomous Mobile Vehicles. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2001 , 32, 361-388	2.9	12
101	Day and Night Collaborative Dynamic Mapping in Unstructured Environment Based on Multimodal Sensors 2020 ,		12
100	Output feedback control design for station keeping of AUVs under shallow water wave disturbances. <i>International Journal of Robust and Nonlinear Control</i> , 2009 , 19, 1447-1470	3.6	11
99	Sensor Placement for Fault Isolability Using Low Complexity Dynamic Programming. <i>IEEE Transactions on Automation Science and Engineering</i> , 2015 , 12, 1080-1091	4.9	10
98	A Passive Repetitive Controller for Discrete-Time Finite-Frequency Positive-Real Systems. <i>IEEE Transactions on Automatic Control</i> , 2009 , 54, 800-804	5.9	10
97	Iterative Tuning With Reactive Compensation for Urban Traffic Signal Control. <i>IEEE Transactions on Control Systems Technology</i> , 2017 , 25, 2047-2059	4.8	9
96	Mode tracking and FDI of hybrid systems 2008 ,		9
95	Sampled-data iterative learning control with well-defined relative degree. <i>International Journal of Robust and Nonlinear Control</i> , 2004 , 14, 719-739	3.6	9
94	Multi-channel learning using anticipatory ILCs. <i>International Journal of Control</i> , 2004 , 77, 1189-1199	1.5	9

93	A High-Bandwidth End-Effector With Active Force Control for Robotic Polishing. <i>IEEE Access</i> , 2020 , 8, 169122-169135	3.5	9
92	Autonomous Target Docking of Nonholonomic Mobile Robots Using Relative Pose Measurements. <i>IEEE Transactions on Industrial Electronics</i> , 2021 , 68, 7233-7243	8.9	9
91	Secure Pose Estimation for Autonomous Vehicles under Cyber Attacks 2019 ,		8
90	Sensor Placement for Fault Isolability Based on Bond Graphs. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 3041-3046	5.9	8
89	Neural network based terminal iterative learning control for uncertain nonlinear non-affine systems. <i>International Journal of Adaptive Control and Signal Processing</i> , 2015 , 29, 1274-1286	2.8	8
88	Repetitive learning control of nonlinear systems over finite intervals. <i>Science China Information Sciences</i> , 2010 , 53, 115-128	3.4	8
87	Mode Tracking of Hybrid Systems in FDI Framework 2008 ,		8
86	Modeling Skidding and Slipping in Wheeled Mobile Robots: Control Design Perspective 2006 ,		8
85	An Analysis of Wheeled Mobile Robots in the Presence of skidding and slipping: Control Design Perspective. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , 2007 ,		8
84	Learning control for a class of nonlinear differential-algebraic systems with application to constrained robots. <i>Journal of Field Robotics</i> , 1996 , 13, 141-151		8
83	Formation Reconstruction and Trajectory Replanning for Multi-UAV Patrol. <i>IEEE/ASME Transactions on Mechatronics</i> , 2021 , 26, 719-729	5.5	8
82	A Survey of Robotic Polishing 2018 ,		8
81	Robust submap-based probabilistic inconsistency detection for multi-robot mapping 2017 ,		7
80	Decentralized control for satellite formation using local relative measurements only 2010 ,		7
79	Fault severity estimation using nonlinear Kalman filter for induction motors under inter-turn fault 2016 ,		7
78	Magnetic-Assisted Initialization for Infrastructure-free Mobile Robot Localization 2019 ,		7
77	Fault Modeling, Estimation, and Fault-Tolerant Steering Logic Design for Single-Gimbal Control Moment Gyro. <i>IEEE Transactions on Control Systems Technology</i> , 2021 , 29, 428-435	4.8	7
76	Extending Bayesian RFS SLAM to multi-vehicle SLAM 2012 ,		6

75	On learning transient, auto-tunings of learnable bandwidth and lead step in iterative learning control. <i>International Journal of Systems Science</i> , 2010 , 41, 353-363	2.3	6
74	Fault detection and isolation in a mobile robot test-bed 2009 ,		6
73	A New Navigation Function Based Decentralized Control of Multi-Vehicle Systems in Unknown Environments. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2017 , 87, 363-377	2.9	5
72	3D feature points detection on sparse and non-uniform pointcloud for SLAM 2017 ,		5
71	Recurrent neural tracking control based on multivariable robust adaptive gradient-descent training algorithm. <i>Neural Computing and Applications</i> , 2012 , 21, 1745-1755	4.8	5
70	Energy-Based Mode Tracking of Hybrid Systems for FDI. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2013 , 43, 14-28	7.3	5
69	Formation tracking of multi-vehicle systems in unknown environments using a multi-region control scheme. <i>International Journal of Control</i> , 2017 , 90, 2760-2771	1.5	4
68	Finite time moving target tracking using nonholonomic vehicles with distance and bearing angle constraints 2017 ,		4
67	A novel mechatronics design of an electrochemical mechanical end-effector for robotic-based surface polishing 2015 ,		4
66	Fault Diagnosis for Satellite Attitude Control Systems With Four Flywheels. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2014 , 136,	1.6	4
65	Stability and robustness analysis of cyclic pseudo-downsampled iterative learning control. <i>International Journal of Control</i> , 2010 , 83, 651-659	1.5	4
64	Cooperative ground target tracking with input constraints 2010 ,		4
63	Effective motion control of the biomimetic undulating fin via iterative learning 2009 ,		4
62	Development and Implementation of a Fault-Tolerant Vehicle-Following Controller for a Four-Wheel-Steering Vehicle 2006 ,		4
61	Model reference learning approach and its applications to robot impedance control		4
60	On anticipatory iterative learning control designs for continuous time nonlinear dynamic systems		4
59	Learning impedance control for robotic manipulators		4
58	Control of constrained manipulators with flexible joints. <i>Journal of Dynamical and Control Systems</i> , 1996 , 6, 33-48		4

57	Knowledge-based role recognition by using human-object interaction and spatio-temporal analysis 2017,		3
56	A robust recurrent simultaneous perturbation stochastic approximation training algorithm for recurrent neural networks. <i>Neural Computing and Applications</i> , 2014 , 24, 1851-1866	4.8	3
55	Incipient fault diagnosis and prognosis for hybrid systems with unknown mode changes 2010,		3
54	A New Passive Repetitive Controller For Discrete-Time Finite-Frequency Positive-Real Systems 2006,		3
53	Stability and Robustness Analysis of Cyclic Pseudo-Downsampled ILC 2007,		3
52	GPS/encoder based precise navigation for a 4WS mobile robot		3
51	Collaborative Semantic Perception and Relative Localization Based on Map Matching 2020,		3
50	Improved Design of The End-Effector for Macro-Mini Robotic Polishing Systems 2017,		3
49	Probabilistic Fusion Framework for Collaborative Robots 3D Mapping 2018,		3
48	Detection and Isolation of Sensor Attacks for Autonomous Vehicles: Framework, Algorithms, and Validation. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2021 , 1-13	6.1	3
47	Iterative tuning strategy for setting phase splits with anticipation of traffic demand in urban traffic network. <i>IET Control Theory and Applications</i> , 2016 , 10, 1469-1479	2.5	2
46	Onboard pseudospectral guidance for re-entry vehicle. <i>Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering</i> , 2014 , 228, 1925-1936	0.9	2
45	Model-based failure prediction for electric machines using particle filter 2014,		2
44	Sensor selection and placement using low complexity dynamic programming 2012,		2
43	Fractional Describing Function Analysis of PMPF Modulator. <i>Mathematical Problems in Engineering</i> , 2013 , 2013, 1-5	1.1	2
42	Passive and periodic circular-like formations at critical inclination around an oblate earth 2010,		2
41	Mode dependent threshold for FDI in hybrid systems 2010,		2
40	Decentralized attitude coordinated control without velocity measurements for spacecraft formation 2010,		2

39	Nonlinear Adaptive Observer Design for Tracking Control of AUVs in Wave Disturbance Condition 2006,		2
38	Better robot tracking accuracy with phase lead compensated ILC		2
37	Multi-channel design for ILC with robot experiments		2
36	Dynamics-based full-state tracking for a car-like mobile robot		2
35	A novel behavior fusion method for the navigation of mobile robots		2
34	A learning control scheme based on neural networks for repeatable robot trajectory tracking 1999,		2
33	Learning control for a class of nonlinear differential-algebraic systems with application to constrained robots		2
32	Real-time normal contact force control for robotic surface processing of workpieces without a priori geometric model. <i>International Journal of Advanced Manufacturing Technology</i> ,1	3.2	2
31	Robust discrete-time iterative learning control: initial shift problem		2
30	Prognosis of Electric Scooter With Intermittent Faults: Dual Degradation Processes Approach. <i>IEEE Transactions on Vehicular Technology</i> , 2021 , 1-1	6.8	2
29	Attention Based Graph Bi-LSTM Networks for Traffic Forecasting 2020,		2
28	Place Recognition Using Line-Junction-Lines in Urban Environments 2019,		2
27	Navigation of multiple mobile robots in unknown environments using a new decentralized navigation function 2016,		2
26	Organ-Based Facial Verification Using Thermal Camera 2016,		2
25	SLAT-Calib: Extrinsic Calibration between a Sparse 3D LiDAR and a Limited-FOV Low-resolution Thermal Camera 2019,		2
24	Dual-Domain-Based Adversarial Defense With Conditional VAE and Bayesian Network. <i>IEEE Transactions on Industrial Informatics</i> , 2021 , 17, 596-605	11.9	2
23	Infrastructure-Free Hierarchical Mobile Robot Global Localization in Repetitive Environments. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2021 , 70, 1-12	5.2	2
22	Winding Fault Diagnosis and Failure Prognosis Technique for Brushless Synchronous Generator. <i>Electric Power Components and Systems</i> , 2020 , 48, 1159-1170	1	1

21	Fault modeling of general momentum exchange devices in spacecraft attitude control systems. <i>Journal of the Franklin Institute</i> , 2020 , 357, 6407-6434	4	1
20	A new gain function for compact exploration 2012 ,		1
19	Sensor placement for fault diagnosis using genetic algorithm 2012 ,		1
18	Sequential prognosis of multiple failures for hybrid systems based on dynamic fault isolation and computational intelligence 2011 ,		1
17	Prediction of multiple failures for a mobile robot steering system 2012 ,		1
16	Satellite formation keeping via real-time optimal control and iterative learning control 2009 ,		1
15	Comparison study of relative dynamic models for satellite formation flying 2008 ,		1
14	Analysis and design of anticipatory learning control		1
13	On learning transient and cutoff frequency tuning in ILC		1
12	Nonlinear output feedback controller design for tracking control of ODIN in wave disturbance condition		1
11	Dynamic positioning of AUVs in shallow water environment: observer and controller design		1
10	Initial shift problem and its ILC solution for nonlinear systems with higher relative degree 2000 ,		1
9	Exponential stabilization of extended chained forms 2000 ,		1
8	Two Nonlinear Robot Controllers for Robust Path Tracking 1993 ,		1
7	A model reaching learning control scheme for a class of nonlinear systems		1
6	Infrastructure-Free Global Localization in Repetitive Environments: An Overview 2020 ,		1
5	Hybrid condition monitoring of nonlinear mechatronic system using biogeography-based optimization particle filter and optimized extreme learning machine. <i>ISA Transactions</i> , 2021 , 120, 342-342 ^{5.5}		1
4	Environment characterization using Laplace eigenvalues 2016 ,		1

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| 3 | CODNet: A Center and Orientation Detection Network for Power Line Following Navigation. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2021 , 1-5 | 4.1 | o |
| 2 | Fuzzy Logic Joint Path Generation for Kinematic Redundant Manipulators with Multiple Criteria. <i>Journal of Intelligent and Fuzzy Systems</i> , 1996 , 4, 89-99 | 1.6 | |
| 1 | Adaptive Attitude Control of Uncertain Spacecraft with Attitude and Angular Velocity Constraints. <i>Lecture Notes in Electrical Engineering</i> , 2023 , 293-309 | 0.2 | |