

Steven Liu

List of Publications by Year in descending order

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137
papers

2,026
citations

471061

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docs citations

137
times ranked

1886
citing authors

#	ARTICLE	IF	CITATIONS
1	A variance-constrained approach to recursive state estimation for time-varying complex networks with missing measurements. <i>Automatica</i> , 2016, 64, 155-162.	3.0	350
2	Energy Management for Smart Grids With Electric Vehicles Based on Hierarchical MPC. <i>IEEE Transactions on Industrial Informatics</i> , 2013, 9, 1528-1537.	7.2	178
3	Integrated current control, energy control and energy balancing of Modular Multilevel Converters. , 2010, , .		127
4	Optimal Control and Scheduling of Switched Systems. <i>IEEE Transactions on Automatic Control</i> , 2011, 56, 135-140.	3.6	78
5	New results on stabilization of networked control systems with packet disordering. <i>Automatica</i> , 2015, 52, 255-259.	3.0	77
6	Suboptimal Event-Triggered Control for Time-Delayed Linear Systems. <i>IEEE Transactions on Automatic Control</i> , 2015, 60, 1386-1391.	3.6	68
7	A Review of Multilevel Converters With Parallel Connectivity. <i>IEEE Transactions on Power Electronics</i> , 2021, 36, 12468-12489.	5.4	68
8	Event-triggered control for discrete-time linear systems subject to bounded disturbance. <i>International Journal of Robust and Nonlinear Control</i> , 2016, 26, 1902-1918.	2.1	66
9	On co-design of filter and fault estimator against randomly occurring nonlinearities and randomly occurring deception attacks. <i>International Journal of General Systems</i> , 2016, 45, 619-632.	1.2	58
10	Fusion Estimation for Sensor Networks With Nonuniform Estimation Rates. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2014, 61, 1485-1498.	3.5	53
11	Event-based networked control and scheduling codesign with guaranteed performance. <i>Automatica</i> , 2015, 57, 128-134.	3.0	46
12	Event-Triggered Control for Linear Systems Subject to Actuator Saturation. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014, 47, 9492-9497.	0.4	41
13	Modeling and current control of modular multilevel converters considering actuator and sensor delays. , 2009, , .		39
14	Generalised analytical methods and current energy control design for modular multilevel cascade converter. <i>IET Power Electronics</i> , 2013, 6, 495-504.	1.5	37
15	A Novel Adaptive Kalman Filtering Approach to Human Motion Tracking With Magnetic-Inertial Sensors. <i>IEEE Transactions on Industrial Electronics</i> , 2020, 67, 8659-8669.	5.2	35
16	Eco-driving assistance system for electric vehicles based on speed profile optimization. , 2014, , .		34
17	Sequential Fusion Estimation for RSS-Based Mobile Robots Localization With Event-Driven WSNs. <i>IEEE Transactions on Industrial Informatics</i> , 2016, 12, 1519-1528.	7.2	32
18	Event-Based Control and Scheduling Codesign: Stochastic and Robust Approaches. <i>IEEE Transactions on Automatic Control</i> , 2015, 60, 1291-1303.	3.6	25

#	ARTICLE	IF	CITATIONS
19	Targeting Posture Control With Dynamic Obstacle Avoidance of Constrained Uncertain Wheeled Mobile Robots Including Unknown Skidding and Slipping. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 6650-6659.	5.9	23
20	UWB/IMU integration approach with NLOS identification and mitigation. , 2018, , .		22
21	Harmonic Interaction Analysis of Delta-Connected Cascaded H-Bridge-Based Shunt Active Power Filter. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 2445-2460.	3.7	21
22	NLOS Identification for UWB Based on Channel Impulse Response. , 2018, , .		19
23	An Event-Triggered Output-Based Model Predictive Control Strategy. IEEE Transactions on Control of Network Systems, 2019, 6, 822-832.	2.4	18
24	Aperiodic Optimal Linear Estimation for Networked Systems With Communication Uncertainties. IEEE Transactions on Cybernetics, 2017, 47, 2256-2265.	6.2	16
25	UWB NLOS identification with feature combination selection based on genetic algorithm. , 2019, , .		16
26	Stochastic MPC with Distributionally Robust Chance Constraints. IFAC-PapersOnLine, 2020, 53, 7136-7141.	0.5	16
27	Optimal control of systems with resource constraints. , 2007, , .		15
28	Multivariable Optimal Control of a Direct AC/AC Converter under Rotating dq Frames. Journal of Power Electronics, 2013, 13, 419-428.	0.9	15
29	Design and control of an electromagnetic valve actuator. , 2006, , .		14
30	Optimal control and scheduling of networked control systems. , 2009, , .		14
31	Stabilization of systems with variable and uncertain sampling period and time delay. Nonlinear Analysis: Hybrid Systems, 2010, 4, 291-305.	2.1	14
32	Multivariable current control of Modular Multilevel Converters with disturbance rejection and harmonics compensation. , 2010, , .		14
33	A modeling and distributed MPC approach for water distribution networks. Control Engineering Practice, 2018, 81, 199-206.	3.2	14
34	Load-frequency control, economic dispatch and unit commitment in smart microgrids based on hierarchical model predictive control. , 2013, , .		13
35	Real-Time Distributed Control of Low-Voltage Grids With Dynamic Optimal Power Dispatch of Renewable Energy Sources. IEEE Transactions on Sustainable Energy, 2019, 10, 417-425.	5.9	13
36	Infrastructure-free indoor pedestrian tracking based on foot mounted UWB/IMU sensor fusion. , 2017, , .		12

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37	Real-Time Scheduling of PI Control Tasks. IEEE Transactions on Control Systems Technology, 2016, 24, 1118-1125.	3.2	11
38	An Optimisation-Based Distributed Cooperative Control for Multi-Robot Manipulation with Obstacle Avoidance. IFAC-PapersOnLine, 2020, 53, 9859-9864.	0.5	11
39	An adaptive learning and control framework based on dynamic movement primitives with application to human-robot handovers. Robotics and Autonomous Systems, 2022, 148, 103935.	3.0	11
40	On-line Motion Prediction and Adaptive Control in Human-Robot Handover Tasks. , 2019, , .		10
41	Robust control and scheduling codesign for networked embedded control systems. , 2011, , .		9
42	An event-triggered cooperation approach for robust distributed model predictive control. IFAC Journal of Systems and Control, 2018, 6, 16-24.	1.1	9
43	A stochastic output-feedback MPC scheme for distributed systems. , 2020, , .		9
44	An Improved Space Vector Modulation With Capacitor Voltage Control for T-Type Five-Level Nested Neutral Point Piloted Converter. IEEE Transactions on Power Electronics, 2021, 36, 5262-5277.	5.4	9
45	Design and control of an electromagnetic valve actuator. , 2006, , .		9
46	Controlling Switchable Electrochromic Glazing for Energy Savings, Visual Comfort and Thermal Comfort: A Model Predictive Control. CivilEng, 2021, 2, 1019-1053.	0.8	9
47	Stabilization of the Furuta Pendulum Using a Nonlinear Control Law Based on the Method of Controlled Lagrangians. , 2007, , .		8
48	Event-based control and scheduling codesign of networked embedded control systems. , 2013, , .		8
49	A novel NLOS mitigation approach for TDOA based on IMU measurements. , 2018, , .		8
50	Distributed Stochastic Model Predictive Control for dynamically coupled Linear Systems using Probabilistic Reachable Sets. , 2019, , .		8
51	Fault diagnosis and fault-tolerant control for a nonlinear electro-hydraulic system. , 2010, , .		7
52	A novel control-schedule codesign method for embedded control systems. , 2012, , .		7
53	NLOS identification and mitigation based on CIR with particle filter. , 2019, , .		7
54	Fault diagnosis integrated fault-tolerant control for a nonlinear electro-hydraulic system. , 2010, , .		6

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55	Efficient Planning of Optimal Trajectory for a Furuta Double Pendulum Using Discrete Mechanics and Optimal Control. IFAC-PapersOnLine, 2017, 50, 10456-10461.	0.5	6
56	Systematic modeling and control of indirect modular multilevel converter (MMC) with grid unbalance estimation. , 2013, , .		5
57	Output-based control and scheduling codesign for control systems sharing a limited resource. , 2013, , .		5
58	Energy Management in Smart Grids with Electric Vehicles based on Pricing. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 182-189.	0.4	5
59	Stability analysis and PI control synthesis under event-triggered communication. , 2015, , .		5
60	Collaboration of multiple mobile manipulators with compliance based Leader/Follower approach. , 2016, , .		5
61	A Nonlinear Bike Model for Purposes of Controller and Observer Design. IFAC-PapersOnLine, 2018, 51, 391-396.	0.5	5
62	A Fast Nonlinear Model Predictive Control Method Based on Discrete Mechanics. IFAC-PapersOnLine, 2018, 51, 141-146.	0.5	5
63	NLOS Detection and Mitigation for UWB/IMU Fusion System Based on EKF and CIR. , 2018, , .		5
64	An optimal operation strategy for an active power filter using cascaded H-bridges in delta-connection. Electric Power Systems Research, 2019, 175, 105918.	2.1	5
65	Detection of the LOS/NLOS state change based on the CIR features. , 2019, , .		5
66	Stochastic Distributed Predictive Tracking Control Under Inexact Minimization. IEEE Transactions on Control of Network Systems, 2021, 8, 1892-1904.	2.4	5
67	ON STABILITY AND CONTROL OF SYSTEMS WITH TIME-VARYING SAMPLING PERIOD AND TIME DELAY. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 858-863.	0.4	4
68	Active Vibration Control of Storage and Retrieval Machines. , 2008, , .		4
69	Decentralised Cooperative Mobile Manipulation with Adaptive Control Parameters. , 2018, , .		4
70	Non-Iterative Distributed Model Predictive Control with Event-Triggered Communication. , 2018, , .		4
71	Shared Impedance Control Based on Reinforcement Learning in a Human-Robot Collaboration Task. Advances in Intelligent Systems and Computing, 2020, , 95-103.	0.5	4
72	On Robustness Properties in Permanent Magnet Machine Control by Using Decoupling Controller. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 43-48.	0.4	3

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73	An event-based online scheduling approach for networked embedded control systems. , 2013, , .		3
74	Integrated current-energy modeling and nonlinear feedback control of modular multilevel STATCOM. , 2014, , .		3
75	Nonlinear controller and observer design for centrifugal pumps. , 2016, , .		3
76	Frequency Support and Stability Analysis for an Integrated Power System with Wind Farms. , 2018, , .		3
77	Nonlinear Model Predictive Control of a Distributed Parameter System with Time-Varying Soft Constraints. , 2019, , .		3
78	An Improved Power Control Approach for Wind Turbine Fatigue Balancing in an Offshore Wind Farm. Energies, 2020, 13, 1549.	1.6	3
79	Event-Based Control of Constrained Discrete-Time Linear Systems with Guaranteed Performance. International Journal of Sensors, Wireless Communications and Control, 2015, 5, 72-80.	0.5	3
80	Observer design for interconnected systems with model reduction and unknown inputs. IFAC-PapersOnLine, 2020, 53, 4169-4174.	0.5	3
81	A Distributed Optimal Control Framework for Multi-Robot Cooperative Manipulation in Dynamic Environments. Journal of Intelligent and Robotic Systems: Theory and Applications, 2022, 105, 1.	2.0	3
82	An approach to reduce complexity in stability analysis for time-varying systems with polytopic uncertainties. , 2009, , .		2
83	Smooth and time-optimal trajectory planning for robot manipulators. , 2012, , .		2
84	Kalman Filter based leak localization applied to pneumatic systems. , 2012, , .		2
85	A new object-oriented fault detection and isolation strategy based on bond-graph formalism. , 2012, , .		2
86	Fusion estimation for two sensors with nonuniform estimation rates. , 2012, , .		2
87	Robust Event-Based Control and Scheduling of Networked Embedded Control Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 7-14.	0.4	2
88	Stochastic event-based control and scheduling of large-scale networked control systems. , 2014, , .		2
89	Iterative Learning Control for Periodic Systems using Model Predictive Methods with adaptive sampling rates. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 158-163.	0.4	2
90	Vibration control of a flexible single-link robot: A backstepping controller for distributed parameter systems. , 2014, , .		2

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91	Adaptive Kalman filter for harmonic detection in active power filter application. , 2015, , .		2
92	An Automated Design Method for Fault Detection and Isolation of Multidomain Systems Based on Object-Oriented Models. IEEE/ASME Transactions on Mechatronics, 2015, 20, 1236-1248.	3.7	2
93	Event-based distributed control of dynamically coupled and constrained linear systems. , 2016, , .		2
94	A privacy preserving negotiation-based control scheme for low voltage grids. , 2016, , .		2
95	Output-Based Event-Triggered Model Predictive Control for Networked Control Systems * *The research works presented here have been partly supported by the German Ministry for Economic Affairs and Energy, project "Net-Control", funding no. 03ET1278C.. IFAC-PapersOnLine, 2017, 50, 8951-8956.	0.5	2
96	Passivity-Based Trajectory Tracking Control for an Autonomous Bicycle. , 2018, , .		2
97	Reduced Model based Fault Detection and Isolation with Residual Threshold Determination. , 2018, , .		2
98	Control-Oriented Modeling and Analysis of a Flexible Beam Carrying a Moving Mass. , 2019, , .		2
99	Motion Planning and Experimental Validation for an Autonomous Bicycle. , 2019, , .		2
100	An introduction for the indoor localization systems and the position estimation algorithms. , 2019, , .		2
101	Flexible body modeling and vibration damping for a planar parallel robot using input shaping. , 2007, , .		1
102	Optimal Control of Networked Control Systems with Uncertain Time-Varying Transmission Delay. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 13-18.	0.4	1
103	Receding-horizon control and scheduling of systems with uncertain computation and communication delays. , 2012, , .		1
104	Robust Feedback Control and Scheduling of Networked Embedded Control Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 127-132.	0.4	1
105	Control design for nodes in decentralized traffic networks with delayed traffic information. , 2013, , .		1
106	Modeling and control for thermal balancing of multi-core processors. Journal of the Franklin Institute, 2013, 350, 1836-1847.	1.9	1
107	An object-oriented design method for Fault Detection and Isolation. , 2013, , .		1
108	PI Control and Scheduling Design for Embedded Control Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 11111-11116.	0.4	1

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109	Integrated current-energy modeling and control for modular multilevel matrix converter. , 2015, , .		1
110	Design of MVDC Power Transmission for a Grid Connected Agricultural Machine. , 2016, , .		1
111	An approach to the polytopic representation of time-varying uncertain systems with reduced complexity and conservatism. , 2016, , .		1
112	An optimal strategy with convex-concave constraints for power factor correction and harmonic compensation under different voltages. , 2016, , .		1
113	Capacitor voltage regulation of modular multilevel cascaded converter (MMCC-SDBC) as shunt active power filter under different PCC voltages. , 2017, , .		1
114	Optimal distributed balancing control for three-phase four-wire low voltage grids. , 2017, , .		1
115	Adaptive Trajectory Tracking for a Planar Two-Wheeled Vehicle with Positive Trail. , 2018, , .		1
116	Cooperative Control of Mobile Manipulators Transporting an Object based on an Adaptive Backstepping Approach. , 2018, , .		1
117	A Distributed Voltage Controller for Medium Voltage Grids with Storage-Containing Loads. , 2018, , .		1
118	Optimal Model Order Reduction for Fault Detection and Isolation. , 2018, , .		1
119	Interconnected model with distributed thermal comfort for model based shading control. Energy and Buildings, 2021, 253, 111530.	3.1	1
120	Quasi Time-Optimal Nonlinear Model Predictive Control with Soft Constraints. IFAC-PapersOnLine, 2020, 53, 6050-6055.	0.5	1
121	Faculty Exchange in Control Education, One Aspect of International Co-Operation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 107-110.	0.4	0
122	Design and Modelling of a Novel Linear Electromagnetic Actuator. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 271-276.	0.4	0
123	Hybrid Approach to Modeling a Flexible Parallel Robot for Vibration Damping. , 2007, , 297.		0
124	Reduced Order Modeling and Direct Parameter Identification for a Complex Parallel Robot. , 2008, , .		0
125	Ein neues Verfahren zum Entwurf von flachheitsbasierten Regelungen. Automatisierungstechnik, 2010, 58, 371-381.	0.4	0
126	Observer based leak diagnosis for pneumatic systems in commercial vehicles. , 2012, , .		0

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127	Integrated energy and parking management for parking areas with electric vehicles. , 2014, , .		0
128	Stochastic MPC of Systems with Additive Disturbance using Scenario Optimization**This work has been partly supported by the Center for Commercial Vehicle Technology (ZNT) at the University of Kaiserslautern funded by Research Initiative of the Federal State of Rhineland-Palatinate.. IFAC-PapersOnLine, 2015, 48, 236-241.	0.5	0
129	Event-based control and scheduling codesign subject to input and state constraints. , 2015, , .		0
130	A comparison of different control methods for injection valves. , 2015, , .		0
131	PI control synthesis for event-triggered control systems. Automatisierungstechnik, 2015, 63, 413-424.	0.4	0
132	Distributed control of constrained linear systems using a resource aware communication strategy for networks with MAC. , 2016, , .		0
133	Process time optimization in reduced order ILC. , 2016, , .		0
134	Nonlinear Controller and Estimator Design for Multi-Pump Systems. , 2018, , .		0
135	Tracking Performance Evaluations on the Robust Teleoperative Control of Multiple Manipulators. , 2019, , .		0
136	Structural Data Compression for Embedded Long Prediction Horizon Model Predictive Control on Resource-Constrained FPGA Platforms. , 2019, , .		0
137	Tube-based Robust Model Predictive Control for a Distributed Parameter System Modeled as a Polytopic LPV. , 2020, , .		0