Jing Sun

List of Publications by Year
in descending order

123 papers	2,994 citations	185998 28 h-index	197535 49 g-index
123 all docs	123 docs citations	123 times ranked	2491 citing authors

#	Article	IF	Citations
1	On-board state of health monitoring of lithium-ion batteries using incremental capacity analysis with support vector regression. Journal of Power Sources, 2013, 235, 36-44.	4.0	405
2	Torque Coordination Control During Mode Transition for a Series–Parallel Hybrid Electric Vehicle. IEEE Transactions on Vehicular Technology, 2012, 61, 2936-2949.	3.9	142
3	Load governor for fuel cell oxygen starvation protection: a robust nonlinear reference governor approach. IEEE Transactions on Control Systems Technology, 2005, 13, 911-920.	3.2	119
4	Control development and performance evaluation for battery/flywheel hybrid energy storage solutions to mitigate load fluctuations in all-electric ship propulsion systems. Applied Energy, 2018, 212, 919-930.	5.1	97
5	Mitigating Power Fluctuations in Electric Ship Propulsion With Hybrid Energy Storage System: Design and Analysis. IEEE Journal of Oceanic Engineering, 2018, 43, 93-107.	2.1	96
6	Cabin and Battery Thermal Management of Connected and Automated HEVs for Improved Energy Efficiency Using Hierarchical Model Predictive Control. IEEE Transactions on Control Systems Technology, 2020, 28, 1711-1726.	3.2	89
7	Real-Time Model Predictive Control for Shipboard Power Management Using the IPA-SQP Approach. IEEE Transactions on Control Systems Technology, 2015, 23, 2129-2143.	3.2	83
8	Robust State of Health estimation of lithium-ion batteries using convolutional neural network and random forest. Journal of Energy Storage, 2022, 48, 103857.	3.9	81
9	Disturbance Compensating Model Predictive Control With Application to Ship Heading Control. IEEE Transactions on Control Systems Technology, 2011, , .	3.2	69
10	A Near-Optimal Power Management Strategy for Rapid Component Sizing of Multimode Power Split Hybrid Vehicles. IEEE Transactions on Control Systems Technology, 2015, 23, 609-618.	3.2	66
11	Adaptive model predictive control with propulsion load estimation and prediction for all-electric ship energy management. Energy, 2018, 150, 877-889.	4.5	66
12	A Real-Time Battery Thermal Management Strategy for Connected and Automated Hybrid Electric Vehicles (CAHEVs) Based on Iterative Dynamic Programming. IEEE Transactions on Vehicular Technology, 2018, 67, 8077-8084.	3.9	66
13	Data-Driven Abnormal Condition Identification and Self-Healing Control System for Fused Magnesium Furnace. IEEE Transactions on Industrial Electronics, 2015, 62, 1703-1715.	5.2	63
14	Hierarchical Design of Connected Cruise Control in the Presence of Information Delays and Uncertain Vehicle Dynamics. IEEE Transactions on Control Systems Technology, 2018, 26, 139-150.	3.2	60
15	Hierarchical MPC for Robust Eco-Cooling of Connected and Automated Vehicles and Its Application to Electric Vehicle Battery Thermal Management. IEEE Transactions on Control Systems Technology, 2021, 29, 316-328.	3.2	60
16	Path following for marine surface vessels with rudder and roll constraints: An MPC approach. , 2009, , .		57
17	Adaptive model predictive control for hybrid energy storage energy management in all-electric ship microgrids. Energy Conversion and Management, 2019, 198, 111929.	4.4	52
18	Current Profile Optimization for Combined State of Charge and State of Health Estimation of Lithium Ion Battery Based on Cramér–Rao Bound Analysis. IEEE Transactions on Power Electronics, 2019, 34, 7067-7078.	5.4	52

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19	Model Parametrization and Adaptation Based on the Invariance of Support Vectors With Applications to Battery State-of-Health Monitoring. IEEE Transactions on Vehicular Technology, 2015, 64, 3908-3917.	3.9	51
20	Parameter Identification and Maximum Power Estimation of Battery/Supercapacitor Hybrid Energy Storage System Based on Cramerâ€"Rao Bound Analysis. IEEE Transactions on Power Electronics, 2019, 34, 4831-4843.	5.4	51
21	A study of cell-to-cell variation of capacity in parallel-connected lithium-ion battery cells. ETransportation, 2021, 7, 100091.	6.8	48
22	The sequential algorithm for combined state of charge and state of health estimation of lithium-ion battery based on active current injection. Energy, 2020, 193, 116732.	4.5	44
23	Offline Identification of Induction Machine Parameters With Core Loss Estimation Using the Stator Current Locus. IEEE Transactions on Energy Conversion, 2016, 31, 1549-1558.	3.7	36
24	Eco-Trajectory Planning with Consideration of Queue along Congested Corridor for Hybrid Electric Vehicles. Transportation Research Record, 2019, 2673, 277-286.	1.0	35
25	Control Strategy for Battery/Flywheel Hybrid Energy Storage in Electric Shipboard Microgrids. IEEE Transactions on Industrial Informatics, 2021, 17, 1089-1099.	7.2	34
26	Model Predictive Control for Power and Thermal Management of an Integrated Solid Oxide Fuel Cell and Turbocharger System. IEEE Transactions on Control Systems Technology, 2014, 22, 911-920.	3.2	33
27	Model Predictive Climate Control of Connected and Automated Vehicles for Improved Energy Efficiency. , 2018, , .		32
28	Aftertreatment control and adaptation for automotive lean burn engines with HEGO sensors. International Journal of Adaptive Control and Signal Processing, 2004, 18, 145-166.	2.3	31
29	Composite Adaptive Internal Model Control and Its Application to Boost Pressure Control of a Turbocharged Gasoline Engine. IEEE Transactions on Control Systems Technology, 2015, 23, 2306-2315.	3.2	31
30	Combined State and Parameter Estimation of Lithium-Ion Battery With Active Current Injection. IEEE Transactions on Power Electronics, 2020, 35, 4439-4447.	5.4	31
31	Sequential optimization of speed, thermal load, and power split in connected HEVs. , 2019, , .		30
32	Real-Time Power Management of Integrated Power Systems in All Electric Ships Leveraging Multi Time Scale Property. IEEE Transactions on Control Systems Technology, 2011, , .	3.2	29
33	Economic MPC with a contractive constraint for nonlinear systems. International Journal of Robust and Nonlinear Control, 2016, 26, 4072-4087.	2.1	27
34	Model-Based Control of an Integrated Fuel Cell and Fuel Processor With Exhaust Heat Recirculation. IEEE Transactions on Control Systems Technology, 2007, 15, 233-245.	3.2	26
35	A Two-Layer Real-Time Optimization Control Strategy for Integrated Battery Thermal Management and HVAC System in Connected and Automated HEVs. IEEE Transactions on Vehicular Technology, 2021, 70, 6567-6576.	3.9	25
36	Two-Layer Model Predictive Battery Thermal and Energy Management Optimization for Connected and Automated Electric Vehicles. , 2018, , .		22

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37	Improving Localization Accuracy in Connected Vehicle Networks Using Rao–Blackwellized Particle Filters: Theory, Simulations, and Experiments. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 2255-2266.	4.7	22
38	Anti–windup controller design for singularly perturbed systems subject to actuator saturation. IET Control Theory and Applications, 2016, 10, 469-476.	1.2	21
39	A Multi-mode Switching-based Command Tracking in Network Controlled Systems with Pointwise-in-Time Constraints and Disturbance Inputs. , 2006, , .		20
40	Integrated optimization of Power Split, Engine Thermal Management, and Cabin Heating for Hybrid Electric Vehicles. , 2019, , .		20
41	Long-Term Vehicle Speed Prediction via Historical Traffic Data Analysis for Improved Energy Efficiency of Connected Electric Vehicles. Transportation Research Record, 2020, 2674, 17-29.	1.0	20
42	Incremental Step Reference Governor for Load Conditioning of Hybrid Fuel Cell and Gas Turbine Power Plants. IEEE Transactions on Control Systems Technology, 2009, 17, 756-767.	3.2	19
43	System Identification of a Model Ship Using a Mechatronic System. IEEE/ASME Transactions on Mechatronics, 2010, 15, 316-320.	3.7	18
44	Modeling and control of automotive powertrain systems: a tutorial. , 0, , .		17
45	A PC-Cluster Based Real-Time Simulator for All-Electric Ship Integrated Power Systems Analysis and Optimization. , 2007, , .		17
46	Eco-Cooling Control Strategy for Automotive Air-Conditioning System: Design and Experimental Validation. IEEE Transactions on Control Systems Technology, 2021, 29, 2339-2350.	3.2	17
47	A hierarchical optimal control strategy for power management of hybrid power systems in all electric ships applications. , 2010, , .		16
48	Simultaneous Identification and Adaptive Torque Control of Permanent Magnet Synchronous Machines. IEEE Transactions on Control Systems Technology, 2017, 25, 1372-1383.	3.2	16
49	Multihorizon Model Predictive Control: An Application to Integrated Power and Thermal Management of Connected Hybrid Electric Vehicles. IEEE Transactions on Control Systems Technology, 2022, 30, 1052-1064.	3.2	15
50	Control analysis of an ejector based fuel cell anode recirculation system. , 2006, , .		14
51	Interaction analysis and integrated control of hybrid energy storage and generator control system for electric ship propulsion. , 2015, , .		14
52	Linear Programming SVM-ARMA$_{m 2K}$ With Application in Engine System Identification. IEEE Transactions on Automation Science and Engineering, 2011, 8, 846-854.	3.4	13
53	Simultaneous Identification and Control for Hybrid Energy Storage System Using Model Predictive Control and Active Signal Injection. IEEE Transactions on Industrial Electronics, 2020, 67, 9768-9778.	5.2	13
54	Simultaneous Identification and Control Using Active Signal Injection for Series Hybrid Electric Vehicles Based on Dynamic Programming. IEEE Transactions on Transportation Electrification, 2020, 6, 298-307.	5.3	13

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55	Path following of a model ship using Model Predictive Control with experimental verification. , 2010, , .		12
56	Integration of plug-in electric vehicle charging and wind energy scheduling on electricity grid. , 2012, , .		12
57	Robust adaptive control: legacies and horizons. International Journal of Adaptive Control and Signal Processing, 2013, 27, 1-3.	2.3	12
58	Optimisation-based control for electrified vehicles: challenges and opportunities. Journal of Control and Decision, 2015, 2, 46-63.	0.7	12
59	Optimal control-based powertrain feasibility assessment: a software implementation perspective. , 0, , .		11
60	MPC for reducing energy storage requirement of wind power systems. , 2013, , .		11
61	Multiobjective economic MPC of constrained nonâ€linear systems. IET Control Theory and Applications, 2016, 10, 1487-1495.	1.2	11
62	Integrated Power and Thermal Management of Connected HEVs via Multi-Horizon MPC. , 2020, , .		11
63	Energy-Optimal Control for Autonomous Underwater Vehicles Using Economic Model Predictive Control. IEEE Transactions on Control Systems Technology, 2022, 30, 2377-2390.	3.2	11
64	Performance Evaluation of Solid Oxide Fuel Cell Engines Integrated With Single/Dual-Spool Turbochargers. Journal of Fuel Cell Science and Technology, 2011, 8, .	0.8	10
65	Set-membership condition monitoring framework for dual fuel engines. , 2016, , .		10
66	Integrated control of power generation, electric motor and hybrid energy storage for all-electric ships. , 2016, , .		10
67	MPC-based Precision Cooling Strategy (PCS) for Efficient Thermal Management of Automotive Air Conditioning System. , 2019, , .		10
68	A Multirange Vehicle Speed Prediction With Application to Model Predictive Control-Based Integrated Power and Thermal Management of Connected Hybrid Electric Vehicles. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2022, 144, .	0.9	10
69	Dynamics, optimization and control of a fuel cell based combined heat power (CHP) system for shipboard applications. , 0, , .		9
70	A tutorial overview of IPA-SQP approach for optimization of constrained nonlinear systems. , 2014, , .		9
71	A Coordinating Control Strategy for Autothermal Fuel Reforming Systems. IEEE Transactions on Control Systems Technology, 2010, 18, 779-788.	3.2	8
72	An Active Perception Framework for Autonomous Underwater Vehicle Navigation Under Sensor Constraints. IEEE Transactions on Control Systems Technology, 2022, 30, 2301-2316.	3.2	8

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73	The Impact of Road Configuration in V2V-Based Cooperative Localization: Mathematical Analysis and Real-World Evaluation. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 3220-3229.	4.7	7
74	Real-Time Model Predictive Control for Energy Management in Autonomous Underwater Vehicle. , 2018, , .		7
75	A data assimilation framework for data-driven flow models enabled by motion tomography. International Journal of Intelligent Robotics and Applications, 2019, 3, 158-177.	1.6	7
76	Robust Energy-optimal Path Following Control for Autonomous Underwater Vehicles in Ocean Currents. , 2020, , .		7
77	Load governor for fuel cell oxygen starvation protection: a robust nonlinear reference governor approach. , 2004, , .		7
78	Hybrid intelligent optimal control of fused magnesium furnaces. , 2010, , .		6
79	A near-optimal power management strategy for rapid component sizing of power split hybrid vehicles with multiple operating modes. , 2013, , .		6
80	Enhanced composite adaptive IMC for boost pressure control of a turbocharged gasoline engine. , 2016, , .		6
81	Battery/flywheel Hybrid Energy Storage to mitigate load fluctuations in electric ship propulsion systems. , 2017, , .		6
82	Zonotope-based set-membership parameter identification of linear systems with additive and multiplicative uncertainties: A new algorithm. , 2017, , .		6
83	Evaluation of the Energy Efficiency in a Mixed Traffic with Automated Vehicles and Human Controlled Vehicles. , 2018, , .		6
84	Energy Management for Autonomous Underwater Vehicles using Economic Model Predictive Control. , 2019, , .		6
85	Thermal Responses of Connected HEVs Engine and Aftertreatment Systems to Eco-Driving. , 2019, , .		5
86	Combined Energy and Comfort Optimization of Air Conditioning System in Connected and Automated Vehicles. , 2019, , .		5
87	Performance of a PEM Fuel Cell Water Management System Using Static Output Feedback. Proceedings of the American Control Conference, 2007, , .	0.0	4
88	Fuel cell based auxiliary power unit modeling, optimization, and control. , 2009, , .		4
89	Large-dimensional multi-objective evolutionary algorithms based on improved average ranking. , 2010, , .		4
90	Optimization and load-following characteristics of 5kw-class tubular solid oxide fuel cell/gas turbine hybrid systems. , 2010, , .		4

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91	Robust Control of Linear Systems With Disturbances Bounded in a State Dependent Set. IEEE Transactions on Automatic Control, 2011, 56, 1740-1745.	3.6	4
92	Internal model control design for linear parameter varying systems. , 2013, , .		4
93	Distributed Motion Tomography for Reconstruction of Flow Fields. , 2019, , .		4
94	Individual Cell Fault Detection for Parallel-Connected Battery Cells Based on the Statistical Model and Analysis. , 2020, , .		4
95	Nonlinear control of an autothermal fuel reforming system. , 2007, , .		3
96	A Numerically Efficient Iterative Procedure for Hybrid Power System Optimization Using Sensitivity Functions. Proceedings of the American Control Conference, 2007, , .	0.0	3
97	Incremental step reference governor for load conditioning of hybrid Fuel Cell and Gas Turbine power plants. , 2008, , .		3
98	Handling roll constraints for path following of marine surface vessels using coordinated rudder and propulsion control. , 2010, , .		3
99	Optimal control of hybrid electric vehicles with power split and torque split strategies: A comparative case study. , 2011, , .		3
100	Parametrization and adaptation of gasoline engine air system model via linear programming Support Vector Regression. , 2012, , .		3
101	Robust control of linear systems with bounded state dependent additive disturbances. , 2010, , .		2
102	A stator current locus approach to induction machine parameter estimation. , 2014, , .		2
103	Enhancement of low-cost GNSS localization in connected vehicle networks using Rao-Blackwellized particle filters. , 2016, , .		2
104	Optimization of vehicle connections in V2V-based cooperative localization. , 2017, , .		2
105	The Impact of Road Configuration on V2V-Based Cooperative Localization. , 2017, , .		2
106	LMI Stability-Constrained Identification for Composite Adaptive Internal Model Control. IEEE Transactions on Automatic Control, 2019, 64, 5039-5050.	3.6	2
107	Robust Hierarchical MPC for Handling Long Horizon Demand Forecast Uncertainty with Application to Automotive Thermal Management. , 2019, , .		2
108	An Active Perception Approach for Mid-Water Localization of Autonomous Underwater Vehicles. , 2020, , .		2

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109	Combined input and parameter estimation with input observers and set-membership parameter bounding. , 2004, , .		1
110	Nonlinear feedback stabilization of high-speed planing vessels by a controllable transom flap. , 0, , .		1
111	Application of linear programming SVM-ARMA$_{2K}$ for dynamic engine modeling. , 2010, , .		1
112	Adaptive decoupling control of the forced-circulation evaporation system using neural networks and multiple models. , 2011, , .		1
113	Comparative performance assessment of 5kW-Class Solid Oxide Fuel cell engines integrated with single/dual-spool turbochargers. , 2011, , .		1
114	Model-based predictive control strategy for a solid oxide fuel cell system integrated with a turbocharger. , 2012, , .		1
115	Design of a Variable Geometry Turbine control strategy for Solid Oxide Fuel Cell and Gas Turbine hybrid systems. , 2012, , .		1
116	A receding horizon approach to simultaneous identification and torque control of permanent magnet synchronous machines. , 2016, , .		1
117	Generalized composite adaptive IMC: Design and analysis. , 2016, , .		1
118	Predictive Second Order Sliding Control of Constrained Linear Systems with Application to Automotive Control Systems. , 2018, , .		1
119	A reference governor approach for dynamic reconfiguration of hybrid power systems. , 2010, , .		0
120	Robust modular control system design using an inner–loop reference model and μ synthesis techniques. International Journal of Robust and Nonlinear Control, 2013, 23, 1338-1359.	2.1	0
121	Adaptive model predictive control in the IPA-SQP framework. , 2013, , .		0
122	Stability of contractive economic MPC with a generalized terminal constraint for nonlinear systems. , 2016, , .		0
123	Model Reference Adaptive Control during Mode Transition of a Parallel Hybrid Electric Vehicle. , 2018, , .		0