

Zongxuan Sun

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.

73
papers

963
citations

19
h-index

28
g-index

84
ext. papers

1,241
ext. citations

4.9
avg, IF

4.95
L-index

#	Paper	IF	Citations
73	2022, 6, 61-66		
72	Adaptive Equivalent Consumption Minimization Strategy for Off-Road Hydraulic Hybrid Vehicles: A Cycle-to-Cycle Optimization Approach. <i>IEEE Transactions on Vehicular Technology</i> , 2021, 1-1	6.8	2
71	Site Operation Strategy for Wheel Loader/Truck Loading and Transportation Cycle. <i>IEEE Transactions on Vehicular Technology</i> , 2021, 70, 4129-4138	6.8	0
70	Eco-Approach With Traffic Prediction and Experimental Validation for Connected and Autonomous Vehicles. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2021, 22, 1562-1572	6.1	19
69	Vehicle Speed and Gear Position Co-Optimization for Energy-Efficient Connected and Autonomous Vehicles. <i>IEEE Transactions on Control Systems Technology</i> , 2021, 29, 1721-1732	4.8	2
68	Energy-Efficient Connected and Automated Vehicles: Real-Time Traffic Prediction-Enabled Co-Optimization of Vehicle Motion and Powertrain Operation. <i>IEEE Vehicular Technology Magazine</i> , 2021, 16, 47-56	9.9	3
67	Improving the Fuel Efficiency of Compact Wheel Loader With a Series Hydraulic Hybrid Powertrain. <i>IEEE Transactions on Vehicular Technology</i> , 2020, 69, 10700-10709	6.8	9
66	Vehicle Speed Prediction for Connected and Autonomous Vehicles Using Communication and Perception 2020,		3
65	A Controlled Trajectory Rapid Compression and Expansion Machine (CT-RCEM) for Chemical Kinetic Investigations. <i>Combustion Science and Technology</i> , 2020, 192, 1754-1771	1.5	1
64	. <i>IEEE/ASME Transactions on Mechatronics</i> , 2019, 24, 1711-1722	5.5	1
63	Evaluating connected and autonomous vehicles using a hardware-in-the-loop testbed and a living lab. <i>Transportation Research Part C: Emerging Technologies</i> , 2019, 102, 121-135	8.4	17
62	Fast Numerical Powertrain Optimization Strategy for Connected Hybrid Electric Vehicles. <i>IEEE Transactions on Vehicular Technology</i> , 2019, 68, 8629-8641	6.8	6
61	Independent Pressure and Flow Rate Control Enabled by Hydraulic Free Piston Engine. <i>IEEE/ASME Transactions on Mechatronics</i> , 2019, 24, 1282-1293	5.5	5
60	Optimal Speed Control for a Connected and Autonomous Electric Vehicle Considering Battery Aging and Regenerative Braking Limits 2019,		4
59	Optimal Vehicle Speed and Gear Position Control for Connected and Autonomous Vehicles 2019,		3
58	Inverse modeling approach for parametric frequency domain analysis of an electrohydraulic system. <i>Mechanical Systems and Signal Processing</i> , 2019, 121, 412-425	7.8	3
57	Optimal Eco-Approach Control With Traffic Prediction for Connected Vehicles 2018,		4

56	A multizone model of the combustion chamber dynamics in a controlled trajectory rapid compression and expansion machine (CT-RCEM). <i>Applied Energy</i> , 2018 , 231, 179-193	10.7	5
55	Spectral Analysis of Electrohydraulic System. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2017 , 139,	1.6	2
54	Integrated vehicle and powertrain optimization for passenger vehicles with vehicle-infrastructure communication. <i>Transportation Research Part C: Emerging Technologies</i> , 2017 , 79, 85-102	8.4	23
53	Hardware-in-the-loop testbed for evaluating connected vehicle applications. <i>Transportation Research Part C: Emerging Technologies</i> , 2017 , 78, 50-62	8.4	34
52	Robust eco-cooperative adaptive cruise control with gear shifting 2017 ,		6
51	Transient motion control for a free-piston engine. <i>Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering</i> , 2017 , 231, 1709-1717	1.4	5
50	Trajectory-based combustion control for renewable fuels in free piston engines. <i>Applied Energy</i> , 2017 , 187, 72-83	10.7	33
49	Vehicle and Powertrain Optimization for Autonomous and Connected Vehicles. <i>Mechanical Engineering</i> , 2017 , 139, S19-S23	0.9	4
48	Integrated optimal eco-driving on rolling terrain for hybrid electric vehicle with vehicle-infrastructure communication. <i>Transportation Research Part C: Emerging Technologies</i> , 2016 , 68, 228-244	8.4	86
47	Energy management strategy for a power-split hydraulic hybrid wheel loader. <i>Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering</i> , 2016 , 230, 1105-1120	1.4	17
46	Using variable piston trajectory to reduce engine-out emissions. <i>Applied Energy</i> , 2016 , 170, 403-414	10.7	28
45	. <i>IEEE Transactions on Industrial Electronics</i> , 2016 , 63, 5724-5732	8.9	11
44	Real-Time Powertrain Optimization Strategy for Connected Hybrid Electrical Vehicle 2016 ,		1
43	Modeling and control of controlled trajectory Rapid Compression Expansion Machine 2016 ,		3
42	Tutorial of model-based powertrain and aftertreatment system control design and implementation 2015 ,		2
41	Precise piston trajectory control for a free piston engine. <i>Control Engineering Practice</i> , 2015 , 34, 30-38	3.9	39
40	A control-oriented model for piston trajectory-based HCCI combustion 2015 ,		3
39	. <i>IEEE/ASME Transactions on Mechatronics</i> , 2015 , 20, 3085-3097	5.5	23

38	Low-Order Stabilizer Design for Discrete Linear Time-Varying Internal Model-Based System. <i>IEEE/ASME Transactions on Mechatronics</i> , 2015 , 20, 2666-2677	5.5	4
37	Modeling of piston trajectory-based HCCI combustion enabled by a free piston engine. <i>Applied Energy</i> , 2015 , 139, 313-326	10.7	43
36	Active Motion Control of a Hydraulic Free Piston Engine. <i>IEEE/ASME Transactions on Mechatronics</i> , 2014 , 19, 1148-1159	5.5	37
35	Robust stabilizer design for linear time-varying internal model based output regulation and its application to an electrohydraulic system. <i>Automatica</i> , 2014 , 50, 1128-1134	5.7	25
34	Time-Varying Internal Model-Based Control of a Camless Engine Valve Actuation System. <i>IEEE Transactions on Control Systems Technology</i> , 2014 , 22, 1498-1510	4.8	19
33	Hybrid powertrain optimization with trajectory prediction based on inter-vehicle-communication and vehicle-infrastructure-integration. <i>Transportation Research Part C: Emerging Technologies</i> , 2014 , 45, 41-63	8.4	65
32	Nonlinear identification and robust tracking control of a camless engine valve actuator based on a Volterra series representation 2014 ,		5
31	A Control-Oriented Two-Zone Charge Mixing Model for HCCI Engines With Experimental Validation Using an Optical Engine. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2014 , 136,	1.6	5
30	Robust position tracking control of a camless engine valve actuator with time-varying reference frequency 2014 ,		1
29	Optimal control of the transient emissions and the fuel efficiency of a diesel hybrid electric vehicle. <i>Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering</i> , 2013 , 227, 1546-1561	1.4	14
28	Non-Intrusive Piston Position Measurement System Using Magnetic Field Measurements. <i>IEEE Sensors Journal</i> , 2013 , 13, 3106-3114	4	27
27	Investigation on the Energy Management Strategy for Hydraulic Hybrid Wheel Loaders 2013 ,		7
26	Novel non-intrusive sensor for piston position measurement 2013 ,		1
25	A new stabilizer for ltv internal model based system and its application to camless engine valve actuation 2013 ,		1
24	Development of control-oriented charge mixing model and experimental validation using graphical analysis 2013 ,		1
23	Pressure-Based Clutch Control for Automotive Transmissions Using a Sliding-Mode Controller. <i>IEEE/ASME Transactions on Mechatronics</i> , 2012 , 17, 534-546	5.5	74
22	Design, Modeling, and Control of a Novel Automotive Transmission Clutch Actuation System. <i>IEEE/ASME Transactions on Mechatronics</i> , 2012 , 17, 582-587	5.5	18
21	Motion control of a hydraulic free-piston engine 2012 ,		1

20	SDP-based extremum seeking energy management strategy for a power-split hybrid electric vehicle 2012 ,		5
19	Robust stabilizer design for Linear time varying internal model based control 2012 ,		2
18	Investigation of time-varying internal model based control for camless engine valve actuation 2012 ,		1
17	Automotive Transmission Clutch Fill Control Using a Customized Dynamic Programming Method. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2011 , 133,	1.6	22
16	Stability Analysis of a Hydraulic Free Piston Engine With HCCI Combustion 2011 ,		11
15	Design, Modeling, and Control of a Camless Valve Actuation System With Internal Feedback. <i>IEEE/ASME Transactions on Mechatronics</i> , 2011 , 16, 527-539	5.5	12
14	Iterative learning control of a fully flexible valve actuation system for non-throttled engine load control. <i>Control Engineering Practice</i> , 2011 , 19, 1490-1505	3.9	12
13	Modeling, Control, and Experimental Validation of a Transient Hydrostatic Dynamometer. <i>IEEE Transactions on Control Systems Technology</i> , 2011 , 19, 1578-1586	4.8	12
12	Modeling and control of a novel pressure regulation mechanism for common rail fuel injection systems. <i>Applied Mathematical Modelling</i> , 2011 , 35, 3473-3483	4.5	31
11	Hybrid powertrain control with a rapid prototyping research platform 2011 ,		1
10	Automotive transmission clutch fill optimal control: An experimental investigation 2010 ,		2
9	Control-oriented mixing model for Homogeneous Charge Compression Ignition engines 2010 ,		4
8	Automotive Active Safety Systems [Introduction to the special section]. <i>IEEE Control Systems</i> , 2010 , 30, 36-37	2.9	7
7	Transient Control of Electro-Hydraulic Fully Flexible Engine Valve Actuation System. <i>IEEE Transactions on Control Systems Technology</i> , 2010 , 18, 613-621	4.8	39
6	Modeling and control design of a camless valve actuation system 2009 ,		2
5	Rotational angle based pressure control of a common rail fuel injection system for internal combustion engines 2009 ,		5
4	Trajectory tracking and disturbance rejection for linear time-varying systems: Input/output representation. <i>Systems and Control Letters</i> , 2009 , 58, 452-460	2.4	29
3	A mechanistic model-based force-feedback scheme for voice-coil actuated radial contour turning. <i>International Journal of Machine Tools and Manufacture</i> , 2001 , 41, 1131-1147	9.4	6

2 Design and Control of Automotive Propulsion Systems

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¹ Online optimization of Pontryagin's minimum principle for a series hydraulic hybrid wheel loader.
Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 095440702110398