

Perry Y Li

List of Publications by Year in descending order

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129
papers

2,220
citations

304368

22
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276539

41
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131
all docs

131
docs citations

131
times ranked

1037
citing authors

#	ARTICLE	IF	CITATIONS
1	Passive velocity field control of mechanical manipulators. IEEE Transactions on Automation Science and Engineering, 1999, 15, 751-763.	2.4	171
2	Liquid piston gas compression. Applied Energy, 2009, 86, 2183-2191.	5.1	167
3	Traffic flow stability induced by constant time headway policy for adaptive cruise control vehicles. Transportation Research Part C: Emerging Technologies, 2002, 10, 275-301.	3.9	94
4	Experimental study of heat transfer enhancement in a liquid piston compressor/expander using porous media inserts. Applied Energy, 2015, 154, 40-50.	5.1	90
5	Modeling and control of an open accumulator Compressed Air Energy Storage (CAES) system for wind turbines. Applied Energy, 2015, 137, 603-616.	5.1	85
6	Passive bilateral feedforward control of linear dynamically similar teleoperated manipulators. IEEE Transactions on Automation Science and Engineering, 2003, 19, 443-456.	2.4	79
7	Passive velocity field control (PVFC). Part I. Geometry and robustness. IEEE Transactions on Automatic Control, 2001, 46, 1346-1359.	3.6	72
8	Passive velocity field control (PVFC). Part II. Application to contour following. IEEE Transactions on Automatic Control, 2001, 46, 1360-1371.	3.6	70
9	AHS safe control laws for platoon leaders. IEEE Transactions on Control Systems Technology, 1997, 5, 614-628.	3.2	69
10	Thermal analysis of a compressor for application to Compressed Air Energy Storage. Applied Thermal Engineering, 2014, 73, 1402-1411.	3.0	61
11	Effects of porous media insert on the efficiency and power density of a high pressure (210â€bar) liquid piston air compressor/expander â€ An experimental study. Applied Energy, 2018, 212, 1025-1037.	5.1	59
12	Control of smart exercise machines. I. Problem formulation and nonadaptive control. IEEE/ASME Transactions on Mechatronics, 1997, 2, 237-247.	3.7	58
13	Using Steady Flow Force for Unstable Valve Design: Modeling and Experiments. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2005, 127, 451-462.	0.9	56
14	Passive Decomposition Approach to Formation and Maneuver Control of Multiple Rigid Bodies. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2007, 129, 662-677.	0.9	37
15	Design, Modeling, and Validation of a High-Speed Rotary Pulse-Width-Modulation On/Off Hydraulic Valve. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2012, 134, .	0.9	37
16	An Automated Highway System link layer controller for traffic flow stabilization. Transportation Research Part C: Emerging Technologies, 1997, 5, 11-37.	3.9	36
17	Open Accumulator Concept for Compact Fluid Power Energy Storage. , 2007, , 127.		34
18	Feedforward stabilization in a bimanual unloading task. Experimental Brain Research, 1992, 89, 172-80.	0.7	31

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19	Traffic flow control in automated highway systems. <i>Control Engineering Practice</i> , 1999, 7, 1071-1078.	3.2	31
20	Development of a novel compact hydraulic power unit for the exoskeleton robot. <i>Mechatronics</i> , 2016, 38, 68-75.	2.0	30
21	Design analysis of a liquid-piston compression chamber with application to compressed air energy storage. <i>Applied Thermal Engineering</i> , 2016, 101, 704-709.	3.0	30
22	High Speed Rotary Pulse Width Modulated On/Off Valve. , 2007, , 89.		28
23	Modeling and control of a novel compressed air energy storage system for offshore wind turbine. , 2012, , .		28
24	Mathematical Modeling of a Two Spool Flow Control Servovalve Using a Pressure Control Pilot1. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2002, 124, 420-427.	0.9	26
25	Control of smart exercise machines. II. Self-optimizing control. <i>IEEE/ASME Transactions on Mechatronics</i> , 1997, 2, 248-258.	3.7	24
26	Soft Switching Approach to Reducing Transition Losses in an On/Off Hydraulic Valve. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2012, 134, .	0.9	23
27	Toward Safe and Human Friendly Hydraulics: The Passive Valve. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2000, 122, 402-409.	0.9	22
28	On Using Unstable Electrohydraulic Valves for Control. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2002, 124, 183-190.	0.9	21
29	Dynamic Redesign of a Flow Control Servovalve Using a Pressure Control Pilot1. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2002, 124, 428-434.	0.9	21
30	Natural Storage Function for Passivity-Based Trajectory Control of Hydraulic Actuators. <i>IEEE/ASME Transactions on Mechatronics</i> , 2014, 19, 1057-1068.	3.7	21
31	Optimal trajectories for a liquid piston compressor/expander in a Compressed Air Energy Storage system with consideration of heat transfer and friction. , 2012, , .		20
32	Passive Decomposition of Mechanical Systems With Coordination Requirement. <i>IEEE Transactions on Automatic Control</i> , 2013, 58, 230-235.	3.6	20
33	An approach to reduce the flow requirement for a liquid piston near-isothermal air compressor/expander in a compressed air energy storage system. <i>IET Renewable Power Generation</i> , 2016, 10, 1506-1514.	1.7	20
34	Software Enabled Variable Displacement Pumps: Experimental Studies. , 2006, , 67.		17
35	Safety Oriented Maneuvers for IVHS. <i>Vehicle System Dynamics</i> , 1996, 26, 271-299.	2.2	16
36	Robust stabilization of tone reproduction curves for the xerographic printing process. <i>IEEE Transactions on Control Systems Technology</i> , 2001, 9, 407-415.	3.2	15

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37	Modeling and Validation of a High Speed Rotary PWM On/Off Valve. , 2009, , .		15
38	Passive Bilateral Teleoperation of a Hydraulic Actuator using an Electrohydraulic Passive Valve. International Journal of Fluid Power, 2004, 5, 43-55.	0.7	14
39	Software Enabled Variable Displacement Pumps. , 2005, , 63.		14
40	Optimal Efficiency-Power Relationship for an Air Motor-Compressor in an Energy Storage and Regeneration System. , 2009, , .		14
41	Bond Graph Based Approach to Passive Teleoperation of a Hydraulic Backhoe. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2006, 128, 176-185.	0.9	13
42	Optimal Efficiency-Power Tradeoff for an Air Motor/Compressor With Volume Varying Heat Transfer Capability. , 2011, , .		13
43	Passive Bilateral Tele-Operation and Human Power Amplification With Pneumatic Actuators. , 2009, , .		11
44	Design of an Interrupted-Plate Heat Exchanger Used in a Liquid-Piston Compression Chamber for Compressed Air Energy Storage. , 2013, , .		11
45	Optimal Efficiency-Power Tradeoff for an Air Compressor/Expander. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2018, 140, .	0.9	11
46	How moisture content affects the performance of a liquid piston air compressor/expander. Journal of Energy Storage, 2018, 18, 121-132.	3.9	11
47	Traffic Flow Stabilization. , 0, , .		10
48	Self-Calibration of Push-Pull Solenoid Actuators in Electrohydraulic Valves. , 2004, , 269.		10
49	Self-Sensing Actuators in Electrohydraulic Valves. , 2004, , 129.		10
50	At-Home Systems and Controls Laboratory. , 2005, , 759.		10
51	A New Passive Controller for a Hydraulic Human Power Amplifier. , 2006, , 1375.		10
52	Robust Optimal Design of Unstable Valves. IEEE Transactions on Control Systems Technology, 2007, 15, 1065-1074.	3.2	10
53	Method to Characterize the Air Flow and Water Removal Characteristics During Vacuum Dewatering. Part II—Analysis and Characterization. Drying Technology, 2008, 26, 341-348.	1.7	10
54	Valve Timing Control for a Digital Displacement Hydraulic Motor Using an Angle-Domain Repetitive Controller. IEEE/ASME Transactions on Mechatronics, 2019, 24, 1306-1315.	3.7	10

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55	Design and Control of a Hydraulic Human Power Amplifier. , 2004, , 385.		9
56	Heat Transfer in a Long, Thin Tube Section of an Air Compressor: An Empirical Correlation From CFD and a Thermodynamic Modeling. , 2012, , .		9
57	Fuel economy comparisons of series, parallel and HMT hydraulic hybrid architectures. , 2013, , .		8
58	Combined Optimal Design and Control of a Near Isothermal Liquid Piston Air Compressor/Expander for a Compressed Air Energy Storage (CAES) System for Wind Turbines. , 2015, , .		8
59	Energy management strategy for a power-split hydraulic hybrid vehicle based on Lagrange multiplier and its modifications. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2019, 233, 511-523.	0.7	8
60	Using Time-Sequential Sampling to Stabilize the Color and Tone Reproduction Functions of a Xerographic Printing Process. IEEE Transactions on Control Systems Technology, 2007, 15, 349-357.	3.2	7
61	Soft Switching Approach to Reducing Transition Losses in an On/Off Hydraulic Valve. , 2009, , .		7
62	A nonlinear spring model of hydraulic actuator for passive controller design in bilateral tele-operation. , 2012, , .		7
63	Storage Power and Efficiency Analysis Based on CFD for Air Compressors Used for Compressed Air Energy Storage. , 2012, , .		7
64	Revenue maximization of electricity generation for a wind turbine integrated with a Compressed Air Energy Storage system. , 2014, , .		7
65	Passivity Based Backstepping Control for Trajectory Tracking Using a Hydraulic Transformer. , 2015, , .		7
66	Optimal design of power-split transmissions for hydraulic hybrid passenger vehicles. , 2011, , .		6
67	Passivity based adaptive control of a two chamber single rod hydraulic actuator. , 2012, , .		6
68	Iterative optimal and adaptive control of a near isothermal liquid piston air compressor in a compressed air energy storage system. , 2013, , .		6
69	Passive Teleoperation of a Multi Degree of Freedom Hydraulic Backhoe Using Dynamic Passive Valve. , 2003, , .		6
70	Pre-emptive control of moisture content in paper manufacturing using surrogate measurements. Transactions of the Institute of Measurement and Control, 2003, 25, 36-56.	1.1	5
71	Analysis and Control Design of a Hydro-Mechanical Hydraulic Hybrid Passenger Vehicle. , 2009, , .		5
72	Passivity Based Nonlinear Control of Hydraulic Actuators Based on an Euler-Lagrange Formulation. , 2011, , .		5

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73	Numerical Investigation of Metal-Foam Filled Liquid Piston Compressor Using a Two-Energy Equation Formulation Based on Experimentally Validated Models. , 2013, , .		5
74	Modeling and Trajectory Optimization of Water Spray Cooling in a Liquid Piston Air Compressor. , 2013, , .		5
75	Optimal design of a compound hybrid system consisting of torque coupling and energy regeneration for hydraulic hybrid excavator. , 2015, , .		5
76	Optimal Operation of a Hybrid Hydraulic Electric Architecture (HHEA) for Off-Road Vehicles Over Discrete Operating Decisions. , 2020, , .		5
77	PASSIVE CONTROL OF FLUID POWERED HUMAN POWER AMPLIFIERS. Proceedings of the JFPS International Symposium on Fluid Power, 2008, 2008, 207-212.	0.1	5
78	PASSIFICATION OF ELECTROHYDRAULIC VALVES USING BOND GRAPHS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 31-36.	0.4	4
79	Modeling and Experimental Study of Flow Forces for Unstable Valve Design. , 2003, , 29.		4
80	Method to Characterize the Air Flow and Water Removal Characteristics during Vacuum Dewatering. Part I Experimental Method. Drying Technology, 2008, 26, 334-340.	1.7	4
81	Displacement Control of Hydraulic Actuators Using a Passivity Based Nonlinear Controller. , 2012, , .		4
82	Achieving Dexterous Manipulation for Minimally Invasive Surgical Robots Through the Use of Hydraulics. , 2012, , .		4
83	Nonlinear Controller Design With Bandwidth Consideration for a Novel Compressed Air Energy Storage System. , 2013, , .		4
84	Optimization of the Axial Porosity Distribution of Porous Inserts in a Liquid-Piston Gas Compressor Using a One-Dimensional Formulation. , 2013, , .		4
85	Numerical Analysis of Heat Exchangers Used in a Liquid Piston Compressor Using a One-Dimensional Model With an Embedded Two-Dimensional Submodel. , 2014, , .		4
86	Prototype Angle-Domain Repetitive Control-Affine Parameterization Approach. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2015, 137, .	0.9	4
87	On/Off Valve Based Position Control of a Hydraulic Cylinder. , 2007, , 141.		3
88	Hierarchical control strategy for a hybrid hydro-mechanical transmission (HMT) power-train. , 2014, , .		3
89	NUMERICAL MODELING OF THREE-DIMENSIONAL HEAT TRANSFER AND FLUID FLOWTHROUGH INTERRUPTED PLATES USING UNIT CELL SCALE. Special Topics and Reviews in Porous Media, 2015, 6, 145-158.	0.6	3
90	Air Compression Performance Improvement via Trajectory Optimization: Experimental Validation. , 2016, , .		3

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91	Control of Self-optimizing Exercise Machines. Annual Reviews in Control, 2000, 24, 201-213.	4.4	3
92	Optimal Control of the Energy-Saving Hybrid Hydraulic-Electric Architecture (HHEA) for Off-Highway Mobile Machines. IEEE Transactions on Control Systems Technology, 2022, 30, 2018-2029.	3.2	3
93	Event based Kalman filter observer for rotary high speed on/off valve. , 2008, , .		2
94	Duty ratio control of a rotary PWM valve with periodic measurement error. , 2009, , .		2
95	High-Speed 4-Way Rotary On/Off Valve for Virtually Variable Displacement Pump/Motor Applications. , 2011, , .		2
96	Optimal Control Experimentation of Compression Trajectories for a Liquid Piston Air Compressor. , 2013, , .		2
97	Multi Degree-of-Freedom Hydraulic Human Power Amplifier With Rendering of Assistive Dynamics. , 2016, , .		2
98	Supervisory Control for a Switched Mode Hydraulic Transformer. , 2018, , .		2
99	Vision based Passive Arm Localization Approach for Underwater ROVs Using a Least Squares on $\$SO(3)\$$ Gradient Algorithm. , 2019, , .		2
100	Energetically Passive Multi-Degree-of-Freedom Hydraulic Human Power Amplifier With Assistive Dynamics. IEEE Transactions on Control Systems Technology, 2020, 28, 1296-1308.	3.2	2
101	Isothermal Compressed Air Energy Storage (i-CAES) System. , 2022, , 204-217.		2
102	Effect of Moisture on the Efficiency and Power Density of a Liquid Piston Air Compressor/Expander. , 2016, , .		2
103	Fabrication of Integrated Pressure-Flow-Temperature Sensor for Hydraulic Systems. , 2006, , .		2
104	Oscillatory Flow Regenerative Heat Exchangers for Application to Energy Storage Systems. , 2017, , .		2
105	Integrated Pressure-Flow-Temperature Sensor for Hydraulic Systems. , 2005, , .		2
106	Mathematical modelling of the effect of sole elasticity distribution on pronation. Journal of Biomechanics, 1992, 25, 501-510.	0.9	1
107	Independent metering of pneumatic actuator for passive human power amplification. , 2010, , .		1
108	Lattice-Based $n\$$ -Point Time-Sequential Sampling and Two-Stage Process Control for Maintaining Tone Consistency of Xerographic Processes. IEEE Transactions on Control Systems Technology, 2013, 21, 2024-2037.	3.2	1

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109	Passive Control of a Hydraulic Human Power Amplifier Using a Hydraulic Transformer. , 2015, , .		1
110	Virtual Vehicle Control Concept for Hydrostatic Dynamometer Control1. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, .	0.9	1
111	Guest Editorial Introduction to the Focused Section on Design and Control of Hydraulic Robots. IEEE/ASME Transactions on Mechatronics, 2017, 22, 585-588.	3.7	1
112	Angle-domain internal model control via a time-varying Kalman filter. , 2017, , .		1
113	Motion Control of Hydraulic Actuators In the Presence of Discrete Pressure Rail Switching. , 2020, , .		1
114	Bondgraph Based Approach to Passive Teleoperation of a Hydraulic Backhoe. , 2004, , .		1
115	Single Degree of Freedom Passive Bilateral Hydraulic Teleoperation Using a Passified Two-Stage Servo-Valve. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 645-650.	0.4	0
116	Towards Human Friendly Hydraulics - Passive Teleoperation of Hydraulic Equipment Using a Force Feedback Joystick. , 0, , .		0
117	DSP utilization in digital color printing. IEEE Signal Processing Magazine, 2005, 22, 104-109.	4.6	0
118	On coordination and stabilization of two xerographic printers. , 2008, , .		0
119	The Center for Compact and Efficient Fluid Power. Mechanical Engineering, 2013, 135, S2-S3.	0.0	0
120	Spray-Cooling for Wind-Based Compressed Air Energy Storage. , 2013, , .		0
121	Design Modeling and Control of a Lab-Scale Compressed Air Energy Storage (CAES) Testbed for Wind Turbines With Simulated Input and Demand Power Variability. , 2014, , .		0
122	Coordination control of a 3 DOF distributed human assistive load lifting system with force amplification. , 2016, , .		0
123	Self-Sensing Dual Push-Pull Solenoids using a Finite Dimension Flux-observer. , 2020, , .		0
124	On Self-Sensing Actuators for Electrohydraulic Valves: Comparisons Between Boxcar Window Observer and Kalman Filter. , 2005, , .		0
125	Adaptive Calibration and Control of Cascade Processes With Unknown Measurement Model and Actuator Dynamics and Its Application to Paper Manufacturing. , 2009, , .		0
126	Storage Function for Passivity Analysis of Pneumatic Actuators With Finite Heat Transfer in Human-Interactive Systems. , 2012, , .		0

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127	Prototype Angle Domain Repetitive Control: Design and Robustness. , 2015, , .		0
128	Human Gesture Robot Control Using a Camera/Accelerometer-in-Palm Sensor. IFAC-PapersOnLine, 2021, 54, 284-289.	0.5	0
129	A Novel 3D Ring-Based Flapper Valve for Soft Robotic Applications. Robotics, 2022, 11, 2.	2.1	0