

Henrik Pedersen

List of Publications by Year in descending order

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100
papers

419
citations

1040056

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102
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102
docs citations

102
times ranked

269
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimum Design of a Moving Coil Actuator for Fast-Switching Valves in Digital Hydraulic Pumps and Motors. IEEE/ASME Transactions on Mechatronics, 2015, 20, 2761-2770.	5.8	43
2	Position Control of an Over-Actuated Direct Hydraulic Cylinder Drive. Control Engineering Practice, 2017, 64, 1-14.	5.5	31
3	Pressure Feedback in Fluid Power Systems – Active Damping Explained and Exemplified. IEEE Transactions on Control Systems Technology, 2018, 26, 102-113.	5.2	17
4	Investigation of New Servo Drive Concept Utilizing Two Fixed Displacement Units. JFPS International Journal of Fluid Power System, 2014, 8, 1-9.	0.3	16
5	Comparison of Methods for Modeling a Hydraulic Loader Crane With Flexible Translational Links. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2015, 137, .	1.6	16
6	Optimal configuration of a discrete fluid power force system utilised in the PTO for WECs. Ocean Engineering, 2016, 117, 88-98.	4.3	15
7	Fluid Stiction Modeling for Quickly Separating Plates Considering the Liquid Tensile Strength. Journal of Fluids Engineering, Transactions of the ASME, 2015, 137, .	1.5	14
8	Early Detection of Coil Failure in Solenoid Valves. IEEE/ASME Transactions on Mechatronics, 2020, 25, 683-693.	5.8	13
9	Experimental evaluation of control strategies for hydraulic servo robot. , 2013, , .		11
10	Optimum design of seat region in valves suitable for digital displacement machines. International Journal of Mechatronics and Automation, 2014, 4, 116.	0.2	11
11	Speed-Variable Switched Differential Pump System for Direct Operation of Hydraulic Cylinders. , 2015, , .		11
12	Signal-Based Gas Leakage Detection for Fluid Power Accumulators in Wind Turbines. Energies, 2017, 10, 331.	3.1	10
13	DESIGN AND MODELLING OF FAST SWITCHING EFFICIENT SEAT VALVES FOR DIGITAL DISPLACEMENT PUMPS. Transactions of the Canadian Society for Mechanical Engineering, 2013, 37, 71-88.	0.8	9
14	Reliability based design of fluid power pitch systems for wind turbines. Wind Energy, 2017, 20, 1097-1110.	4.2	9
15	Design, Optimization and Analysis of Hydraulic Soft Yaw System for 5 MW Wind Turbine. Wind Engineering, 2011, 35, 529-549.	1.9	8
16	Design of energy efficient SMISMO-ELS control strategies. , 2011, , .		8
17	Robust Non-Chattering Observer Based Sliding Control Concept for Electro-Hydraulic Drives. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 99-108.	0.4	8
18	Discrete Linear Time Invariant Analysis of Digital Fluid Power Pump Flow Control. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, .	1.6	8

#	ARTICLE	IF	CITATIONS
19	Model based feasibility study on bidirectional check valves in wave energy converters. International Journal of Marine Energy, 2014, 5, 1-23.	1.8	7
20	Fault Detection and Diagnosis Methods for Fluid Power Pitch System Components – A Review. Energies, 2021, 14, 1305.	3.1	7
21	On the Influence of Piston and Cylinder Density in Tribodynamics of a Radial Piston Digital Fluid Power Displacement Motor. , 2015, , .		6
22	Reducing pressure oscillations in discrete fluid power systems. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2016, 230, 1093-1105.	1.0	6
23	Temperature-Independent Fault Detection of Solenoid-Actuated Proportional Valve. IEEE/ASME Transactions on Mechatronics, 2022, 27, 4497-4506.	5.8	6
24	Control of a 420 kN Discrete Displacement Cylinder Drive for the Wavestar Wave Energy Converter. , 2014, , .		5
25	Reliable Fluid Power Pitch Systems: A Review of State of the Art for Design and Reliability Evaluation of Fluid Power Systems. , 2015, , .		5
26	Energy Cost of Avoiding Pressure Oscillations in a Discrete Fluid Power Force System. , 2015, , .		5
27	COMPARISON OF LINEAR CONTROLLERS FOR A HYDRAULIC SERVO SYSTEM. Proceedings of the JFPS International Symposium on Fluid Power, 2005, 2005, 449-454.	0.1	5
28	Modeling and Control of a Teletruck Using Electronic Load Sensing. , 2010, , .		4
29	2-SMC of Electro-Hydraulic Drives Using the Twisting Algorithm. Applied Mechanics and Materials, 2012, 233, 131-134.	0.2	4
30	Optimization of geometry of annular seat valves suitable for Digital Displacement fluid power pumps/motors. , 2013, , .		4
31	Design and Experimental Validation of Hydraulic Yaw System for Multi MW Wind Turbine. International Journal of Fluid Power, 2013, 14, 27-38.	0.7	4
32	Design Method for Fast Switching Seat Valves for Digital Displacement [®] Machines. , 2014, , .		4
33	Oil Stiction in Fast Switching Annular Seat Valves for Digital Displacement Fluid Power Machines. , 2014, , .		4
34	Asymptotic Approximation of Laminar Lubrication Thermal Field at Low Reduced Peclet and Brinkman Number. Journal of Tribology, 2014, 136, .	1.9	4
35	Robust Electric Load Sensing Applied to an Open Circuit Axial Piston Pump. , 2006, , 1.		3
36	Preliminary findings of soft yaw concept. , 2011, , .		3

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37	Analysis of Temperature's Influence on a Digital Displacement Pump's Volumetric Efficiency. Applied Mechanics and Materials, 2012, 233, 24-27.	0.2	3
38	Robust Position Tracking for Electro-Hydraulic Drives Based on Generalized Feedforward Compensation Approach. Applied Mechanics and Materials, 0, 233, 100-103.	0.2	3
39	Topology selection and analysis of actuator for seat valves suitable for use in Digital Displacement pumps/motors. , 2013, , .		3
40	Investigation of Self Yaw and its Potential Using a Hydraulic Soft Yaw System for 5 MW Wind Turbine. Wind Engineering, 2013, 37, 165-181.	1.9	3
41	Analytical Thermal Field Theory Applicable to Oil Hydraulic Fluid Film Lubrication. , 2014, , .		3
42	On Application of Second Order Sliding Mode Control to Electro-Hydraulic Systems. , 2014, , .		3
43	Guidelines for Properly Adjusting Pressure Feedback in Systems With Over-Centre Valves. , 2016, , .		3
44	Experimental Validation of Flow Force Models for Fast Switching Valves. , 2017, , .		3
45	Application of Model Predictive Control in Discrete Displacement Cylinders to Drive a Knuckle Boom Crane. , 2018, , .		3
46	Numerical investigation of switching features of a hydraulic seat valve with annular flow geometry. International Journal of Fluid Power, 2018, 19, 152-164.	0.7	3
47	Measurements of a Novel Digital Hydraulic Valve Comprising a Cushioning Feature. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2020, 142, .	1.6	3
48	Model-Based Estimation of Gas Leakage for Fluid Power Accumulators in Wind Turbines. , 2017, , .		3
49	Feasibility of Deep Neural Network Surrogate Models in Fluid Dynamics. Modeling, Identification and Control, 2019, 40, 71-87.	1.1	3
50	Modelling and simulation of mobile hydraulic crane with telescopic arm. Australian Journal of Mechanical Engineering, 2005, 2, 105-116.	2.1	2
51	Investigation and Comparison of Separate Meter-In Separate Meter-Out Control Strategies. , 2013, , .		2
52	Simulation of Dynamic Behaviour of a Digital Displacement Motor Using Transient 3D Computational Fluid Dynamics Analysis. , 2013, , .		2
53	Modeling of Dynamic Fluid Forces in Fast Switching Valves. , 2015, , .		2
54	On the application of reynolds theory to thermo-piezo-viscous lubrication in oil hydraulics. , 2015, , .		2

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55	A Generic Model Based Tracking Controller for Hydraulic Valve-Cylinder Drives. , 2016, , .		2
56	Reducing Fatigue Loading due to Pressure Shift in Discrete Fluid Power Force Systems. , 2016, , .		2
57	A Robust Control Concept for Hydraulic Drives Based on Second Order Sliding Mode Disturbance Compensation. , 2017, , .		2
58	Risk-Based Comparative Study of Fluid Power Pitch Concepts. , 2017, , .		2
59	Investigating Fault Detection and Diagnosis in a Hydraulic Pitch System Using a State Augmented EKF-Approach. , 2019, , .		2
60	Robust and Adaptive Resolved Motion Control of a Hydraulic Loader Crane. , 2003, , 505.		1
61	Control of Oscillations in Electrically Driven Skid Steer Vehicles. , 2003, , 17.		1
62	Power Management in Hydraulically Actuated Mobile Equipment. , 2007, , 151.		1
63	Sliding Control with Chattering Elimination for Hydraulic Drives. Applied Mechanics and Materials, 0, 233, 168-171.	0.2	1
64	An approach for state observation in dynamical systems based on the twisting algorithm. , 2013, , .		1
65	Method for Lumped Parameter Simulation of Digital Displacement Pumps/Motors Based on CFD. Applied Mechanics and Materials, 0, 397-400, 615-620.	0.2	1
66	Design of Bidirectional Check Valve for Discrete Fluid Power Force System for Wave Energy Converters. , 2013, , .		1
67	Finite-time convergent continuous control design based on sliding mode algorithms with application to a hydraulic drive. International Journal of Mechatronics and Automation, 2014, 4, 188.	0.2	1
68	Morphological topology generation of a digital fluid power displacement unit using Chebychev-Grübler-Kutzbach constraint. , 2015, , .		1
69	State of the Art Review on Theoretical Tribology of Fluid Power Displacement Machines. , 2016, , .		1
70	Influence of the Lubricant Thermo-Piezo-Viscous Property on Hydrostatic Bearings in Oil Hydraulics. , 2016, , .		1
71	Analysis of the Thermo-Viscous Effect on Friction and Energy Dissipation in Oil Lubricated Interfaces. , 2016, , .		1
72	Towards a modelling framework for designing active check valves â€“ a review of state-of-the-art. International Journal of Fluid Power, 2018, 19, 49-64.	0.7	1

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73	Experimental Validation of Leakage Detection in a Fluid Power Pitch System Using a State Augmented EKF-Approach. , 2020, , .		1
74	Discrete Learning Control with Application to Hydraulic Actuators. Modeling, Identification and Control, 2015, 36, 215-224.	1.1	1
75	FEEDBACK LINEARISATION APPLIED ON A HYDRAULIC SERVO SYSTEM. Proceedings of the JFPS International Symposium on Fluid Power, 2005, 2005, 167-172.	0.1	1
76	Using an Electrically Scale Model to Evaluate Control Strategy for Damping of Hydraulically Driven Off-Highway Vehicles. , 2003, , 81.		0
77	Mechatronic Control Engineering: A Problem Oriented and Project Based Learning Curriculum in Mechatronic. , 2007, , 629.		0
78	Presenting a Multi-Level Superstructure Optimization Approach for Mechatronic System Design. , 2010, , .		0
79	Human mobile inverted pendulum transporter — A mechatronic system case study. , 2011, , .		0
80	Analysis of and H^∞ controller design for an electro-hydraulic servo pressure regulator. , 2011, , .		0
81	A novel control approach based on second order sliding modes & its application to hydraulic drives. , 2013, , .		0
82	Design of a multi-poppet on-off valve for wave energy converters. , 2013, , .		0
83	Multibody Dynamics of a Fluid Power Radial Piston Motor Including Transient Hydrodynamic Pressure Models in Lubricating Gaps. , 2013, , .		0
84	Second Order Sliding Control With State Dependent Gain and its Application to a Hydraulic Drive. , 2013, , .		0
85	An Approach for Second Order Control With Finite Time Convergence for Electro-Hydraulic Drives. , 2013, , .		0
86	Output Feedback Control of Electro-Hydraulic Cylinder Drives Using the Twisting Algorithm. , 2014, , .		0
87	On/off multi-poppet valve for switching manifold in discrete fluid power force system PTO in wave energy converters. International Journal of Mechatronics and Automation, 2014, 4, 84.	0.2	0
88	On orientation control of suspended blade during installation in wind turbines. , 2015, , .		0
89	A low order adaptive control scheme for hydraulic servo systems. , 2015, , .		0
90	Investigation of Load Reduction Possibilities in Wind Turbines Using a Fluid Power Pitch System. , 2015, , .		0

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91	An Analytic Approach to Cascade Control Design for Hydraulic Valve-Cylinder Drives. , 2016, , .		0
92	An Energy Efficient Hydraulic Winch Drive Concept Based on a Speed-Variable Switched Differential Pump. , 2017, , .		0
93	An Arbitrary Order Adaptive Control Structure With Application to a Hydraulic Winch Drive. , 2017, , .		0
94	Analysis and Control of a Self-Contained Hydraulic Winch Drive. , 2018, , .		0
95	A Multi-Agent Evolution Algorithm Used for Input Shaping of a Repetitive Non-Linear Dynamic System. , 2018, , .		0
96	Development of Methodology for Lifetime Calculation for Axial Piston Units. , 2018, , .		0
97	Evaluating the Influence of Leaking Active Check Valves in Digital Displacement ^Å Units. , 2018, , .		0
98	Determining Actuator Requirements for Cyclic Varying Pitch Propeller for Ships. Energies, 2021, 14, 6554.	3.1	0
99	An Optimisation Approach Applied to Design the Hydraulic Power Supply for a Forklift Truck. , 2004, , .		0
100	Systematic Methodology for Reliability Analysis of Components in Axial Piston Units. , 2019, , .		0