Nariman Sepehri

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5451297/publications.pdf

Version: 2024-02-01

133	1,892	279701	330025
papers	citations	23	37
		h-index	g-index

137	137	137	1403
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A practical method for friction identification in hydraulic actuators. Mechatronics, 2011, 21, 350-356.	2.0	91
2	A Wavelet-Based Approach to Internal Seal Damage Diagnosis in Hydraulic Actuators. IEEE Transactions on Industrial Electronics, 2010, 57, 1755-1763.	5.2	88
3	Internal Leakage Detection in Hydraulic Actuators Using Empirical Mode Decomposition and Hilbert Spectrum. IEEE Transactions on Instrumentation and Measurement, 2012, 61, 368-378.	2.4	83
4	Hardware-in-the-loop simulator for research on fault tolerant control of electrohydraulic actuators in a flight control application. Mechatronics, 2009, 19, 1067-1077.	2.0	82
5	Hydraulic Actuator Leakage Fault Detection using Extended Kalman Filter. International Journal of Fluid Power, 2005, 6, 41-51.	0.7	78
6	Active disturbance rejection control applied to automated steering for lane keeping in autonomous vehicles. Control Engineering Practice, 2018, 74, 13-21.	3.2	71
7	Diagnosis of process valve actuator faults using a multilayer neural network. Control Engineering Practice, 2003, 11, 1289-1299.	3.2	58
8	A Wavelet-Based Approach for External Leakage Detection and Isolation From Internal Leakage in Valve-Controlled Hydraulic Actuators. IEEE Transactions on Industrial Electronics, 2011, 58, 4374-4384.	5.2	56
9	Performance evaluation of haptic handâ€controllers in a robotâ€assisted surgical system. International Journal of Medical Robotics and Computer Assisted Surgery, 2015, 11, 486-501.	1.2	45
10	Position Control of an Electrohydrostatic Actuator With Tolerance to Internal Leakage. IEEE Transactions on Control Systems Technology, 2016, 24, 2224-2232.	3.2	40
11	Tracking Control of Hydraulic Actuators Using a LuGre Friction Model Compensation. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2008, 130, .	0.9	39
12	Electrohydraulic force control design of a hardware-in-the-loop load emulator using a nonlinear QFT technique. Control Engineering Practice, 2012, 20, 598-609.	3.2	39
13	A novel hand-controller for remote ultrasound imaging. Mechatronics, 2008, 18, 578-590.	2.0	38
14	Dynamic analysis of variable structure force control of hydraulic actuators via the reaching law approach. International Journal of Control, 2004, 77, 1260-1268.	1.2	32
15	On quantitative feedback design for robust position control of hydraulic actuators. Control Engineering Practice, 2010, 18, 289-299.	3.2	32
16	Sample Entropy of Human Gait Center of Pressure Displacement: A Systematic Methodological Analysis. Entropy, 2018, 20, 579.	1.1	32
17	Quantifying workspace and forces of surgical dissection during robotâ€assisted neurosurgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2016, 12, 528-537.	1.2	30
18	A robotic wrist for remote ultrasound imaging. Mechanism and Machine Theory, 2011, 46, 1153-1170.	2.7	29

#	Article	IF	Citations
19	Design and experimental study of a dynamical adaptive backsteppingâ€“sliding mode control scheme for position tracking and regulating of a lowâ€cost pneumatic cylinder. International Journal of Robust and Nonlinear Control, 2016, 26, 853-875.	2.1	29
20	Leakage Fault Detection in Hydraulic Actuators Subject to Unknown External Loading. International Journal of Fluid Power, 2008, 9, 15-25.	0.7	28
21	Impact stabilizing controller for hydraulic actuators with friction: Theory and experiments. Control Engineering Practice, 2006, 14, 1423-1433.	3.2	27
22	Active Disturbance Rejection Control Applied to High-order Systems with Parametric Uncertainties. International Journal of Control, Automation and Systems, 2019, 17, 1483-1493.	1.6	25
23	Design and performance analysis of position-based impedance control for an electrohydrostatic actuation system. Chinese Journal of Aeronautics, 2018, 31, 584-596.	2.8	23
24	Application of Fast Fourier and Wavelet Transforms Towards Actuator Leakage Diagnosis: A Comparative Study. International Journal of Fluid Power, 2013, 14, 39-51.	0.7	22
25	Fractional-Order Control of Hydraulically Powered Actuators: Controller Design and Experimental Validation. IEEE/ASME Transactions on Mechatronics, 2019, 24, 796-807.	3.7	22
26	Four-Quadrant Analysis and System Design for Single-Rod Hydrostatic Actuators. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2019, 141, .	0.9	22
27	Design, Implementation and Evaluation of a Pump-Controlled Circuit for Single Rod Actuators. Actuators, 2017, 6, 10.	1.2	21
28	Design of a Lyapunov Controller for an Electro-hydraulic Actuator During Contact Tasks. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2001, 123, 299-307.	0.9	21
29	Calibration of omnidirectional wheeled mobile robots: method and experiments. Robotica, 2013, 31, 969-980.	1.3	19
30	A throttle-less single-rod hydraulic cylinder positioning system: Design and experimental evaluation. Advances in Mechanical Engineering, 2015, 7, 168781401558324.	0.8	19
31	The Effects of Aging and Dual Tasking on Human Gait Complexity During Treadmill Walking: A Comparative Study Using Quantized Dynamical Entropy and Sample Entropy. Journal of Biomechanical Engineering, 2018, 140, .	0.6	19
32	A Wavelet-Based Approach for Diagnosis of Internal Leakage in Hydraulic Actuators using On-Line Measurements. International Journal of Fluid Power, 2010, 11, 61-69.	0.7	18
33	An augmented virtual fixture to improve task performance in robot-assisted live-line maintenance. Computers and Electrical Engineering, 2015, 43, 292-305.	3.0	18
34	Internal Leakage Detection in Electrohydrostatic Actuators Using Multiscale Analysis of Experimental Data. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 2734-2747.	2.4	18
35	Non-linear position control of cooperative hydraulic manipulators handling unknown payloads. International Journal of Control, 2005, 78, 196-207.	1.2	17
36	Calculation of Lyapunov Exponents using Nonstandard Finite Difference Discretization Scheme: A Case Study. Journal of Difference Equations and Applications, 2004, 10, 369-378.	0.7	16

#	Article	IF	Citations
37	EXPERIMENTAL EVALUATION OF BILATERAL CONTROL SCHEMES APPLIED TO HYDRAULIC ACTUATORS: A COMPARATIVE STUDY. Transactions of the Canadian Society for Mechanical Engineering, 2009, 33, 377-398.	0.3	16
38	DESIGN AND OPTIMIZATION OF AN EIGHT-BAR LEGGED WALKING MECHANISM IMITATING A KINETIC SCULPTURE, â€œWIND BEASTâ€• Transactions of the Canadian Society for Mechanical Engineering, 2012, 36, 343-355.	0.3	16
39	Attitude and position controller design and implementation for a quadrotor. International Journal of Advanced Robotic Systems, 2017, 14, 172988141770924.	1.3	16
40	Selection of Network Parameters in Wireless Control of Bilateral Teleoperated Manipulators. IEEE Transactions on Industrial Informatics, 2015, 11, 1445-1456.	7.2	15
41	A Pump-Controlled Circuit for Single-Rod Cylinders that Incorporates Limited Throttling Compensating Valves. Actuators, 2018, 7, 13.	1.2	15
42	On design of continuous Lyapunov's feedback control. Journal of the Franklin Institute, 2005, 342, 702-723.	1.9	14
43	Design and Prototyping of a Force-Reflecting Hand-Controller for Ultrasound Imaging. Journal of Mechanisms and Robotics, 2011, 3, .	1.5	13
44	Live-line maintenance training using robotics technology. , 2013, , .		13
45	Mixed reality temporal bone surgical dissector: mechanical design. Journal of Otolaryngology - Head and Neck Surgery, 2014, 43, 23.	0.9	13
46	Position referenced force augmentation in teleoperated hydraulic manipulators operating under delayed and lossy networks: A pilot study. Robotics and Autonomous Systems, 2016, 83, 231-242.	3.0	13
47	Quantitative Fault Tolerant Control Design for a Leaking Hydraulic Actuator. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2010, 132, .	0.9	12
48	A Lyapunov controller for stable haptic manipulation of hydraulic actuators. International Journal of Robust and Nonlinear Control, 2012, 22, 241-261.	2.1	12
49	High precision position control of electro-hydrostatic actuators in the presence of parametric uncertainties and uncertain nonlinearities. Mechatronics, 2020, 68, 102363.	2.0	12
50	Position control of an electro-hydrostatic asymmetric actuator operating in all quadrants. Mechatronics, 2020, 67, 102344.	2.0	12
51	Beneficially combining LQR and PID to control longitudinal dynamics of a SmartFly UAV. , 2016, , .		11
52	Surgical tool motion during conventional freehand and robot-assisted microsurgery conducted using neuroArm. Advanced Robotics, 2016, 30, 621-633.	1.1	11
53	Automated steering controller design for vehicle lane keeping combining linear active disturbance rejection control and quantitative feedback theory. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2018, 232, 937-948.	0.7	11
54	Understanding overall efficiency of hydrostatic pumps and motors. International Journal of Fluid Power, 2018, 19, 106-116.	0.7	11

#	Article	IF	Citations
55	Decentralized Coordinated Motion Control of Two Hydraulic Actuators Handling a Common Object. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2007, 129, 729-741.	0.9	10
56	A Comparison of Institutional Approaches to CEAB Graduate Attribute Requirements. Proceedings of the Canadian Engineering Education Association (CEEA), 0, , .	0.2	10
57	Signal-Based Gas Leakage Detection for Fluid Power Accumulators in Wind Turbines. Energies, 2017, 10, 331.	1.6	10
58	Equivalent Time-Invariant Modelling of Electrohydraulic Actuators with Application to Robust Control Synthesis. International Journal of Fluid Power, 2008, 9, 7-18.	0.7	9
59	A Wavelet-Based Approach for Online External Leakage Diagnosis and Isolation from Internal Leakage in Hydraulic Actuators. International Journal of Fluid Power, 2011, 12, 37-47.	0.7	9
60	Emotional Learning Based Position Control of Pneumatic Actuators. Intelligent Automation and Soft Computing, 2014, 20, 433-450.	1.6	9
61	A throttle-less single rod hydraulic cylinder positioning system for switching loads. Case Studies in Mechanical Systems and Signal Processing, 2015, 1, 27-31.	1.4	9
62	Quantifying force and positional frequency bands in neurosurgical tasks. Journal of Robotic Surgery, 2016, 10, 97-102.	1.0	9
63	Reliability based design of fluid power pitch systems for wind turbines. Wind Energy, 2017, 20, 1097-1110.	1.9	9
64	A Lyapunov Stable Controller for Bilateral Haptic Teleoperation of Single-Rod Hydraulic Actuators. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, .	0.9	9
65	Lyapunov stable displacement-mode haptic manipulation of hydraulic actuators: theory and experiment. International Journal of Control, 2012, 85, 1313-1326.	1.2	8
66	Fault-Tolerant Actuating Pressure Controller Design for an Electrohydrostatic Actuator Experiencing a Leaky Piston Seal. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, .	0.9	8
67	Globalized and bounded Nelderâ€Mead algorithm with deterministic restarts for tuning controller parameters: Method and application. Optimal Control Applications and Methods, 2017, 38, 1042-1055.	1.3	8
68	On tracking control of cooperative hydraulic manipulators. International Journal of Control, 2007, 80, 454-469.	1.2	7
69	Observer-based adaptive control of chaos in nonlinear discrete-time systems using time-delayed state feedback. Chaos, Solitons and Fractals, 2009, 41, 2448-2455.	2.5	7
70	A Hybrid Haptic Sensation for Teleoperation of Hydraulic Manipulators. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2015, 137, .	0.9	7
71	A prototype telerobotic platform for live transmission line maintenance: Review of design and development. Transactions of the Institute of Measurement and Control, 2018, 40, 3273-3292.	1.1	7
72	Comparison of selected measures of gait stability derived from center of pressure displacement signal during single and dual-task treadmill walking. Medical Engineering and Physics, 2019, 74, 49-57.	0.8	7

#	Article	IF	Citations
73	THE ATTRIBUTE ASSESSMENT PROCESS AT THE UNIVERSITY OF MANITOBA. Proceedings of the Canadian Engineering Education Association (CEEA), 1969, , .	0.2	6
74	Haptic-enabled control of hydraulic manipulators applied to power line maintenance: Concept & implementation. , 2010, , .		6
75	Wireless Control of a Teleoperated Hydraulic Manipulator With Application Towards Live-Line Maintenance. , 2013, , .		6
76	RUBRICS AS A VEHICLE TO DEFINE THE TWELVE CEAB GRADUATE ATTRIBUTES, DETERMINE GRADUATE COMPETENCIES, AND DEVELOP A COMMON LANGUAGE FOR ENGINEERING STAKEHOLDERS. Proceedings of the Canadian Engineering Education Association (CEEA), 2015, , .	0.2	6
77	Development of a graphical user interface for a socially interactive robot: A case study evaluation. , 2016, , .		6
78	Design and experimental evaluation of a dynamical adaptive backstepping-sliding mode control scheme for positioning of an antagonistically paired pneumatic artificial muscles driven actuating system. International Journal of Control, 2017, 90, 249-274.	1.2	6
79	Stability analysis of a controlled mechanical system with parametric uncertainties in LuGre friction model. International Journal of Control, 2018, 91, 770-784.	1.2	6
80	On control of a base-excited inverted pendulum using neural networks. Journal of the Franklin Institute, 2000, 337, 267-286.	1.9	5
81	Elements of virtual temporal bone surgery: Manipulandum format may be more important to surgeons than haptic device force capabilities. Laryngoscope Investigative Otolaryngology, 2017, 2, 358-362.	0.6	5
82	Synthesis of a MIMO QFT controller for hydraulic hybrid swing system of excavators. International Journal of Fluid Power, 2018, 19, 1-13.	0.7	5
83	Modelâ€free online tuning of controller parameters using a globalized local search algorithm. Optimal Control Applications and Methods, 2018, 39, 1750-1765.	1.3	5
84	A Critical Analysis of Valve-Compensated Hydrostatic Actuators: Qualitative Investigation. Actuators, 2019, 8, 59.	1.2	5
85	EFFECT OF NETWORK QUALITY ON PERFORMANCE OF BILATERAL TELEOPERATED HYDRAULIC ACTUATORS: A COMPARATIVE STUDY. Control and Intelligent Systems, 2013, 41, .	0.3	5
86	Control of base-excited inverted pendulums using a neural inverse modeling approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1999, 32, 5111-5116.	0.4	4
87	A TEST RIG FOR EXPERIMENTATION ON FAULT TOLERANT CONTROL AND CONDITION MONITORING ALGORITHMS IN FLUID POWER SYSTEMS: FROM DESIGN THROUGH IMPLEMENTATION. Transactions of the Canadian Society for Mechanical Engineering, 2005, 29, 441-458.	0.3	4
88	Hydraulic Actuator Internal Leakage Detection Using Cross-Correlation Time Series Analysis. , 2014, , .		4
89	Quantitative analysis and evaluation of bilateral control schemes applied to electro-hydrostatic actuators. Mechatronics, 2017, 44, 107-120.	2.0	4
90	Improving the Performance of Pump-Controlled Circuits for Single-Rod Actuators. Actuators, 2019, 8, 26.	1.2	4

#	Article	IF	Citations
91	Dynamic Surface Control of Cooperating Hydraulic Manipulators in the Presence of Friction. Proceedings of the American Control Conference, 2007, , .	0.0	3
92	Position Tracking of a Pneumatic Actuator Using Backstepping-Sliding Mode Control With Adaptive Friction Observer. , 2013, , .		3
93	THE ATTRIBUTE ASSESSMENT PROCESS AT THE UNIVERSITY OF MANITOBA: YEAR TWO. Proceedings of the Canadian Engineering Education Association (CEEA), 2013, , .	0.2	3
94	Towards Oscillation Reduction in Forestry Cranes. , 2016, , .		3
95	A data acquisition system based on Raspberry Pi: Design, construction and evaluation. , 2016, , .		3
96	Controller Design and Stability Analysis of Output Pressure Regulation in Electrohydrostatic Actuators. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2019, 141, .	0.9	3
97	FOPID Control with Parameter Optimization for Hydrostatically-Actuated Autonomous Excavators. IEEE Instrumentation and Measurement Magazine, 2021, 24, 109-117.	1.2	3
98	Parents' Perspectives on a Computer Gameâ€“Assisted Rehabilitation Program for Manual Dexterity in Children With Cerebral Palsy: Qualitative Analysis of Expectations, Child Engagement, and Benefits. JMIR Rehabilitation and Assistive Technologies, 2021, 8, e24337.	1.1	3
99	UNILATERAL CONTROL OF TELEOPERATED HYDRAULIC MANIPULATORS FOR LIVE-LINE MAINTENANCE: COMPARATIVE STUDY. International Journal of Robotics and Automation, 2014, 29, .	0.1	3
100	Measuring the Losses of Hydrostatic Pumps and Motors: A Critical Review of ISO4409:2007. , 2019, , .		3
101	Detection of Faults in Electro-Hydrostatic Actuators Using Feature Extraction Methods and an Artificial Neural Network. , 2022, , .		3
102	On stability analysis via Lyapunov exponents calculated based on radial basis function networks. International Journal of Control, 2011, 84, 1326-1341.	1.2	2
103	ON HIGH BANDWIDTH OUTPUT PRESSURE CONTROL DESIGN OF HYDRAULIC ACTUATORS USING QUANTITATIVE FEEDBACK THEORY. Transactions of the Canadian Society for Mechanical Engineering, 2014, 38, 533-555.	0.3	2
104	Bilateral teleoperation of a pneumatic actuator: experiment and stability analysis. International Journal of Fluid Power, 2015, 16, 99-110.	0.7	2
105	EXPERIMENTAL COMPARISON BETWEEN PROPORTIONAL AND PWM-SOLENOID VALVES CONTROLLED SERVOPNEUMATIC POSITIONING SYSTEMS. Transactions of the Canadian Society for Mechanical Engineering, 2017, 41, 65-83.	0.3	2
106	Design of a low-bandwidth position controller based on system identification for an electro-hydrostatic actuator. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2018, 232, 149-160.	0.7	2
107	Condition Monitoring of Industrial Machines Using Cloud Communication. , 2018, , .		2
108	Reliability and validity of a computer game-based tool of upper extremity assessment for object manipulation tasks in children with cerebral palsy. Journal of Rehabilitation and Assistive Technologies Engineering, 2021, 8, 205566832110140.	0.6	2

#	Article	IF	Citations
109	Optimization-Driven Controller Design for a High-Performance Electro-Hydrostatic Asymmetric Actuator Operating in All Quadrants. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2021, 143, .	0.9	2
110	A Practical Approach for Designing Fault-Tolerant Position Controllers in Hydraulic Actuators: Methodology and Experimental Validation. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2020, 142, .	0.9	2
111	Design of a force controller for a hydraulic actuator in contact with an uncertain environment via quantitative feedback theory. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1999, 32, 3289-3294.	0.4	1
112	Decision-making in fuzzy environments using ontological control with fuzzy automata. , 2010, , .		1
113	FORCE REGULATING USING CONCEPTS OF HAPTIC AND VISUAL FORCE FEEDBACKS. Transactions of the Canadian Society for Mechanical Engineering, 2011, 35, 177-199.	0.3	1
114	Design and Stability Analysis of a QFT Pressure Controller of a Hydraulic Actuator Using Takagi-Sugeno Fuzzy Model. , 2015, , .		1
115	A SOLUTION FOR NONLINEAR STABILITY ANALYSIS OF QFT CONTROLLERS DESIGNED FOR HYDRAULICALLY ACTUATED SYSTEMS. Transactions of the Canadian Society for Mechanical Engineering, 2016, 40, 265-287.	0.3	1
116	Ferroelectric random access memory (FRAM) fatigue test with Arduino and Raspberry Pi. , 2016, , .		1
117	A critical review of the existing models for direct operated hydraulic relief valves with the proposal of a new modelling approach. International Journal of Fluid Power, 0, , 1-13.	0.7	1
118	Stability Study of a Pump-Controlled Circuit for Single Rod Cylinders via the Concept of Lyapunov Exponents. , 2017, , .		1
119	A Critical Analysis of Flow-Compensated Hydrostatic Single Rod Actuators: Simulation Study. Actuators, 2020, 9, 58.	1.2	1
120	Computer Game-Based Telerehabilitation Platform Targeting Manual Dexterity: Exercise Is Fun. â€œYou Are Kiddingâ€”Right?â€• Sensors, 2021, 21, 5766.	2.1	1
121	EXPERIMENTAL COMPARISON BETWEEN PROPORTIONAL AND PWM-SOLENOID VALVES CONTROLLED SERVOPNEUMATIC POSITIONING SYSTEMS. Transactions of the Canadian Society for Mechanical Engineering, 2017, 41, 65-83.	0.3	1
122	A Nonlinear Integral Sliding Surface to Improve the Transient Response of a Force-Controlled Pneumatic Actuator With Long Transmission Lines. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2019, 141, .	0.9	1
123	Position-Mode Haptic-Based Control of Teleoperated Hydraulic Actuators. , 2011, , .		0
124	Stability Analysis of QFT Controllers Designed for Hydraulic Actuators Using Takagi-Sugeno Fuzzy Modeling Approach. , 2013, , .		0
125	Comparison Between an Intelligent Controller and a Sliding Mode Controller to Positioning Pneumatic Actuators. , 2014, , .		0
126	THE FACULTY OF ENGINEERING ATTRIBUTE ASSESSMENT PROCESS AT THE UNIVERSITY OF MANITOBA: SUGGESTIONS FOR CLOSING THE LOOP. Proceedings of the Canadian Engineering Education Association (CEEA), 0, , .	0.2	0

#	Article	IF	Citations
127	THE ATTRIBUTE ASSESSMENT PROCESS IN THE FACULTY OF ENGINEERING AT THE UNIVERSITY OF MANITOBA: YEAR THREE. Proceedings of the Canadian Engineering Education Association (CEEA), 2015, , .	0.2	0
128	A Lyapunov Stable Controller for Bilateral Haptic Teleoperation of Single-Rod Hydraulic Actuators Subjected to Base Disturbance. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2019, 141, .	0.9	0
129	Admittance-Controlled Teleoperation of a Pneumatic Actuator: Implementation and Stability Analysis. Actuators, 2020, 9, 103.	1.2	0
130	The Process of Continual Improvement of Engineering Programs at the University of Manitoba: Now and Next. Proceedings of the Canadian Engineering Education Association (CEEA), 0, , .	0.2	0
131	Evaluation of Walking Ability Using Variance Fractal Dimension Trajectory. , 0, , .		0
132	A Do-and-See Approach for Learning Mechatronics Concepts. , 0, , .		0
133	The Cavitation Issue in Asymmetrical Axial-Piston Pumps. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2022, 144, .	0.9	0