

Leonid B Freidovich

List of Publications by Year in descending order

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96
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331670

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254184

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96
all docs

96
docs citations

96
times ranked

1281
citing authors

#	ARTICLE	IF	CITATIONS
1	Robust orbital stabilization: A Floquet theory-based approach. International Journal of Robust and Nonlinear Control, 2021, 31, 8075-8108.	3.7	5
2	Out-of-Distribution Detection for Deep Neural Networks With Isolation Forest and Local Outlier Factor. IEEE Access, 2021, 9, 132980-132989.	4.2	16
3	Accurate Position Regulation of an Electro-Hydraulic Actuator via Uncertainty Compensation-Based Controller. Studies in Systems, Decision and Control, 2021, , 279-303.	1.0	0
4	Analysis of Higher Order Sliding Mode Controllers with Boundary Layer Approximation. , 2021, , .		3
5	Almost periodic motion planning and control for double rotary pendulum with experimental validation. Asian Journal of Control, 2020, 22, 2434-2443.	3.0	1
6	Describing-function-based analysis to tune parameters of chattering reducing approximations of Sliding Mode controllers. Control Engineering Practice, 2020, 95, 104230.	5.5	16
7	Constructing Transverse Coordinates for Orbital Stabilization of Periodic Trajectories. , 2020, , .		0
8	Periodic motion planning and control for double rotary pendulum via virtual holonomic constraints. IEEE/CAA Journal of Automatica Sinica, 2019, 6, 291-298.	13.1	3
9	Periodic motion planning and control for underactuated mechanical systems. International Journal of Control, 2018, 91, 1350-1362.	1.9	9
10	Barrier Sliding Mode Control and On-line Trajectory Generation for the Automation of a Mobile Hydraulic Crane. , 2018, , .		2
11	On Orbital Stabilization for Industrial Manipulators: Case Study in Evaluating Performances of Modified PD+ and Inverse Dynamics Controllers. IEEE Transactions on Control Systems Technology, 2017, 25, 101-117.	5.2	21
12	Robust position control design for a cylinder in mobile hydraulics applications. Control Engineering Practice, 2017, 69, 36-49.	5.5	14
13	Towards Oscillation Reduction in Forestry Cranes. , 2016, , .		3
14	Interval differentiators: On-line estimation of differentiation accuracy. , 2016, , .		0
15	Input nonlinearity compensation and chattering reduction in a mobile hydraulic forestry crane. Elektrotechnik Und Informationstechnik, 2016, 133, 248-252.	1.1	1
16	Beneficially combining LQR and PID to control longitudinal dynamics of a SmartFly UAV. , 2016, , .		11
17	Interactive on-line trajectories for semi-automation: Case study of a forwarder crane. , 2016, , .		3
18	SDP-based approximation of stabilising solutions for periodic matrix Riccati differential equations. International Journal of Control, 2016, 89, 1396-1405.	1.9	9

#	ARTICLE	IF	CITATIONS
19	Time-Varying Gain Differentiator: A Mobile Hydraulic System Case Study. IEEE Transactions on Control Systems Technology, 2016, 24, 1740-1750.	5.2	27
20	Algorithms for finding gaits of locomotive mechanisms: case studies for Gorilla robot brachiation. Autonomous Robots, 2016, 40, 849-865.	4.8	3
21	Automation of slewing motions for forestry cranes. , 2015, , .		9
22	Automation of front end loaders: Self leveling task. , 2015, , .		6
23	$\hat{\mu}$ -invariant output stabilization: Homogeneous approach and dead zone compensation. , 2015, , .		3
24	Case study in non-prehensile manipulation: planning and orbital stabilization of one-directional rollings for the “Butterfly” robot. , 2015, , .		19
25	A dynamic human motion: coordination analysis. Biological Cybernetics, 2015, 109, 47-62.	1.3	6
26	Path-Constrained Motion Analysis: An Algorithm to Understand Human Performance on Hydraulic Manipulators. IEEE Transactions on Human-Machine Systems, 2015, 45, 187-199.	3.5	13
27	Second order sliding mode control of a mobile hydraulic crane. , 2014, , .		11
28	Increasing the Level of Automation in the Forestry Logging Process with Crane Trajectory Planning and Control. Journal of Field Robotics, 2014, 31, 343-363.	6.0	61
29	Controlled Invariants and Trajectory Planning for Underactuated Mechanical Systems. IEEE Transactions on Automatic Control, 2014, 59, 2555-2561.	5.7	54
30	Sliding mode control of a forestry-standard mobile hydraulic system. , 2014, , .		5
31	Time-Varying Gain Second Order Sliding Mode Differentiator. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 1374-1379.	0.4	6
32	Robustness of the Moore-Greitzer Compressor Model's Surge Subsystem with New Dynamic Output Feedback Controllers. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 3690-3695.	0.4	1
33	Integrated time-optimal trajectory planning and control design for industrial robot manipulator. , 2013, , .		7
34	Adaptive compensation of disturbances formed as sums of sinusoidal signals with application to an active vibration control benchmark. European Journal of Control, 2013, 19, 253-265.	2.6	31
35	Stable Walking Gaits for a Three-Link Planar Biped Robot With One Actuator. IEEE Transactions on Robotics, 2013, 29, 589-601.	10.3	41
36	A remark on Controlled Lagrangian approach. European Journal of Control, 2013, 19, 438-444.	2.6	5

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37	Controlled invariants and trajectory planning for underactuated mechanical systems. , 2013, , .		0
38	Analytic parameterization of stabilizing controllers for the surge subsystem of the Moore-Greitzer compressor model. , 2013, , .		1
39	Performance analysis of relay feedback position regulators for manipulators with Coulomb friction. , 2013, , .		1
40	A Remark on Controlled Lagrangian Approach for Completely Integrable Mechanical Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 54-59.	0.4	1
41	Transverse Linearization for Underactuated Nonholonomic Mechanical Systems with Application to Orbital Stabilization. Lecture Notes in Control and Information Sciences, 2012, , 245-258.	1.0	1
42	Generating oscillations in inertia wheel pendulum via twoâ€relay controller. International Journal of Robust and Nonlinear Control, 2012, 22, 318-330.	3.7	21
43	Periodic motion planning and nonlinear $\hat{\alpha}$ -tracking control of a 3-DOF underactuated helicopter. International Journal of Systems Science, 2011, 42, 829-838.	5.5	41
44	On generating pre-defined periodic motions in underactuated mechanical systems: the cart-pendulum example*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 4588-4593.	0.4	1
45	Nonlinear Output Feedback $\hat{\alpha}$ -Tracking Control of a 3-DOF Underactuated Helicopter. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 11145-11150.	0.4	3
46	Open-loop control experiments on driver assistance for crane forestry machines. , 2011, , .		9
47	Analysis of limit-cycle walking for a compass-like biped robot *. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 1181-1186.	0.4	0
48	Traversing from point-to-point along a straight line with a ballbot. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 125-130.	0.4	1
49	Gait synthesis for a three-link planar biped walker with one actuator. , 2010, , .		1
50	Natural sit-down and chair-rise motions for a humanoid robot. , 2010, , .		9
51	Optimal ball pitching with an underactuated model of a human arm. , 2010, , .		11
52	Parallel Elastic Actuators as a Control Tool for Preplanned Trajectories of Underactuated Mechanical Systems. International Journal of Robotics Research, 2010, 29, 1186-1198.	8.5	72
53	LuGre-Model-Based Friction Compensation. IEEE Transactions on Control Systems Technology, 2010, 18, 194-200.	5.2	179
54	Steps in trajectory planning and controller design for a hydraulically driven crane with limited sensing. , 2010, , .		3

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55	Transverse Linearization for Controlled Mechanical Systems With Several Passive Degrees of Freedom. IEEE Transactions on Automatic Control, 2010, 55, 893-906.	5.7	140
56	Transverse linearization for mechanical systems with several passive degrees of freedom with applications to orbital stabilization. , 2009, , .		0
57	Orbital stabilization of a pre-planned periodic motion to swing up the Furuta pendulum: Theory and experiments. , 2009, , .		1
58	Modification via averaging of partial-energy-shaping control for creating oscillations: cart-pendulum example. International Journal of Control, 2009, 82, 1582-1590.	1.9	4
59	A Passive 2-DOF Walker: Hunting for Gaits Using Virtual Holonomic Constraints. IEEE Transactions on Robotics, 2009, 25, 1202-1208.	10.3	56
60	Criteria for global stability of coupled systems with application to robust output feedback design for active surge control. , 2009, , .		6
61	New approach for swinging up the Furuta pendulum: Theory and experiments. Mechatronics, 2009, 19, 1240-1250.	3.3	46
62	Shaping stable periodic motions of inertia wheel pendulum: theory and experiment. Asian Journal of Control, 2009, 11, 548-556.	3.0	21
63	Transverse Linearization for Impulsive Mechanical Systems With One Passive Link. IEEE Transactions on Automatic Control, 2009, 54, 2882-2888.	5.7	47
64	Transverse linearization for mechanical systems with passive links, impulse effects, and friction forces. , 2009, , .		7
65	Inducing oscillations in an inertia wheel pendulum via two-relays controller: Theory and experiments. , 2009, , .		5
66	Partial-Energy-Shaping Control for Orbital Stabilization of High-Frequency Oscillations of the Furuta Pendulum. IEEE Transactions on Control Systems Technology, 2009, 17, 853-858.	5.2	40
67	Motion planning for humanoid robots based on virtual constraints extracted from recorded human movements. Intelligent Service Robotics, 2008, 1, 289-301.	2.6	8
68	Can we make a robot ballerina perform a pirouette? Orbital stabilization of periodic motions of underactuated mechanical systems. Annual Reviews in Control, 2008, 32, 200-211.	7.9	92
69	Periodic motions of the Pendubot via virtual holonomic constraints: Theory and experiments. Automatica, 2008, 44, 785-791.	5.0	82
70	Performance Recovery of Feedback-Linearization-Based Designs. IEEE Transactions on Automatic Control, 2008, 53, 2324-2334.	5.7	387
71	A passive 2DOF walker: Finding gait cycles using virtual holonomic constraints. , 2008, , .		2
72	How springs can help to stabilize motions of underactuated systems with weak actuators. , 2008, , .		1

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73	Periodic motion planning and analytical computation of transverse linearizations for hybrid mechanical systems. , 2008, , .		7
74	Stability Analysis and Control Design for an Underactuated Walking Robot via Computation of a Transverse Linearization. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 10166-10171.	0.4	25
75	Experimental implementation of stable oscillations of the Furuta pendulum around the upward equilibrium. , 2007, , .		2
76	Generating human-like motions for an underactuated three-link robot based on the virtual constraints approach. , 2007, , .		5
77	TRANSITIONS BETWEEN LIMIT CYCLES FOR AN UNDERACTUATED SYSTEM: VIRTUAL CONSTRAINTS APPROACH1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 468-473.	0.4	4
78	CAN WE MAKE A ROBOT BALLERINA PERFORM A PIROUETTE? ORBITAL STABILIZATION OF PERIODIC MOTIONS OF UNDERACTUATED MECHANICAL SYSTEMS1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 32-43.	0.4	0
79	LMI APPROACH FOR SOLVING PERIODIC MATRIX RICCATI EQUATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 254-256.	0.4	9
80	CAN WE MAKE A ROBOT BALLERINA PERFORM A PIROUETTE? ORBITAL STABILIZATION OF PERIODIC MOTIONS OF UNDERACTUATED MECHANICAL SYSTEMS1 1The work has been partly supported by the Swedish Research Council (the grants: 2005-4182, 2006-5243) and the Kempe Foundation.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 32-43.	0.4	0
81	Partial-energy-shaping control for orbital stabilization of high frequency oscillations of the Furuta pendulum. , 2007, , .		9
82	Discussion on: "Robustness of PID-controlled Manipulators vis-à-vis Actuator Dynamics and External Disturbances" European Journal of Control, 2007, 13, 577-579.	2.6	0
83	Virtual-Holonomic-Constraints-Based Design of Stable Oscillations of Furuta Pendulum: Theory and Experiments. IEEE Transactions on Robotics, 2007, 23, 827-832.	10.3	85
84	Achievable balancing motions for a humanoid robot. , 2007, , .		0
85	Stable periodic motions of inertia wheel pendulum via virtual holonomic constraints. , 2007, , .		5
86	Lyapunov-based switching control of nonlinear systems using high-gain observers. Automatica, 2007, 43, 150-157.	5.0	48
87	Discussion on: Robustness of PID-controlled Manipulators vis-à-vis Actuator Dynamics and External Disturbances. European Journal of Control, 2007, 13, 577-582.	2.6	0
88	Robust Feedback Linearization using Extended High-Gain Observers. , 2006, , .		45
89	Friction compensation based on LuGre model. , 2006, , .		22
90	Virtual-Constraints-Based Design of Stable Oscillations of Furuta Pendulum: Theory and Experiments. , 2006, , .		6

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91	Logic-based switching for robust control of minimum-phase nonlinear systems. Systems and Control Letters, 2005, 54, 713-727.	2.3	21
92	Universal Integral Controllers for Robotic Manipulators 1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 351-356.	0.4	2
93	Robust Stabilization of Robotic Manipulators by PID Controllers. Journal of Dynamical and Control Systems, 1999, 9, 203-222.	0.4	55
94	Some Estimates of Performance for PID-Like Control of Robotic Manipulators. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 85-90.	0.4	1
95	Output Feedback Stabilization of the Moore-Greitzer Compressor Model. , 0, , .		6
96	Lyapunov-based switching control of nonlinear systems using high-gain observers. , 0, , .		6