

Vadim I Utkin

List of Publications by Year in descending order

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118
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118
times ranked

6455
citing authors

#	ARTICLE	IF	CITATIONS
1	Data-Driven Modeling and Design of Multivariable Dynamic Sliding Mode Control for the Underground Coal Gasification Project Thar. IEEE Transactions on Control Systems Technology, 2022, 30, 153-165.	5.2	7
2	Neuro-adaptive sliding mode control for underground coal gasification energy conversion process. International Journal of Control, 2022, 95, 2337-2348.	1.9	4
3	Sliding Mode Optimization in Robot Dynamics With LPV Controller Design. , 2022, 6, 1760-1765.		4
4	Alternator with controllable frequency and amplitude. , 2022, , .		0
5	Sliding mode control of photovoltaic based power generation systems for microgrid applications. International Journal of Control, 2021, 94, 1704-1715.	1.9	15
6	Sliding mode control of an ozone generator based on dual AC/DC/AC power converters. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2021, 235, 448-460.	1.0	5
7	Robust multi-objective control design for underground coal gasification energy conversion process. International Journal of Control, 2020, 93, 328-335.	1.9	8
8	Conventional and high order sliding mode control. Journal of the Franklin Institute, 2020, 357, 10244-10261.	3.4	129
9	Road Map for Sliding Mode Control Design. SpringerBriefs in Mathematics, 2020, , .	0.3	65
10	Open Problems in SMC. SpringerBriefs in Mathematics, 2020, , 115-124.	0.3	0
11	Adaptive SMC. SpringerBriefs in Mathematics, 2020, , 99-108.	0.3	0
12	Adaptive speed tracking controller for a brush-less DC motor using singular perturbation.. IFAC-PapersOnLine, 2020, 53, 3880-3885.	0.9	4
13	Design Principles. SpringerBriefs in Mathematics, 2020, , 29-48.	0.3	0
14	High-Order Sliding Mode Control. SpringerBriefs in Mathematics, 2020, , 83-89.	0.3	0
15	Direct Sliding Mode Control of a Three-Phase AC/DC Power Converter for the Velocity Regulation of a DC Motor. IFAC-PapersOnLine, 2020, 53, 13359-13364.	0.9	1
16	SM Observers. SpringerBriefs in Mathematics, 2020, , 61-71.	0.3	0
17	Design of Feedback Systems with Uncertainties, Based on Equivalent Control. , 2019, , .		2
18	Decentralized sliding-mode control of robotic manipulator with constraint workspace: a finite-convergent barrier Lyapunov approach. , 2019, , .		3

#	ARTICLE	IF	CITATIONS
19	Optimal configuration and energy management scheme of an isolated micro-grid using Cuckoo search optimization algorithm. Journal of the Franklin Institute, 2019, 356, 4191-4214.	3.4	19
20	Sliding mode controllerâ€“observer pair for p53 pathway. IET Systems Biology, 2019, 13, 204-211.	1.5	5
21	Design of a Continuous Signal Generator Based on Sliding Mode Control of Three-Phase AC-DC Power Converters. Energies, 2019, 12, 4468.	3.1	1
22	Sliding Mode Control of Underground Coal Gasification Energy Conversion Process. IEEE Transactions on Control Systems Technology, 2018, 26, 587-598.	5.2	14
23	Sliding mode control of power converters: DC/DC converters. International Journal of Control, 2018, 91, 2472-2493.	1.9	45
24	Sliding-mode control of power converters: AC/DC converters & DC/AC inverters. International Journal of Control, 2018, 91, 2573-2587.	1.9	24
25	Frequency control of DC/AC inverter. , 2016, , .		2
26	Chattering analysis of sliding mode self-optimization systems. , 2016, , .		1
27	Divergence theorem for super twisting control. , 2016, , .		0
28	Chattering analysis of conventional and super twisting sliding mode control algorithm. , 2016, , .		40
29	Switching Frequency Optimization of DC/AC Inverters Using Sliding Mode. Studies in Systems, Decision and Control, 2016, , 581-595.	1.0	0
30	Discussion Aspects of High-Order Sliding Mode Control. IEEE Transactions on Automatic Control, 2016, 61, 829-833.	5.7	240
31	Energy Management Design in Hybrid Electric Vehicles: A Novel Optimality and Stability Framework. IEEE Transactions on Control Systems Technology, 2015, 23, 1307-1322.	5.2	33
32	Brief comments for the continuation method by A.F. Filippov for solution continuation on a discontinuity set. Automation and Remote Control, 2015, 76, 863-871.	0.8	2
33	Constrained rigid body stability and control. International Journal of Robust and Nonlinear Control, 2015, 25, 1601-1622.	3.7	4
34	Disturbance attenuation in nonlinear perturbed diffusion processes by sampled-in-space sensing and actuation. , 2014, , .		1
35	Mechanical energy-based Lyapunov function design for twisting and super-twisting sliding mode control. IMA Journal of Mathematical Control and Information, 2014, , dnu010.	1.7	5
36	Sliding mode control of three-phase, boost-type and three-Wire, single-phase AC/DC power converters. , 2014, , .		8

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37	Second order sliding mode block control of single-phase induction motors. International Journal of Robust and Nonlinear Control, 2014, 24, 682-698.	3.7	5
38	On Convergence Time and Disturbance Rejection of Super-Twisting Control. IEEE Transactions on Automatic Control, 2013, 58, 2013-2017.	5.7	183
39	Sliding mode control of AC/DC power converters. , 2013, , .		6
40	Adaptive sliding mode control with application to super-twist algorithm: Equivalent control method. Automatica, 2013, 49, 39-47.	5.0	437
41	Adaptive Sliding Mode Control. Lecture Notes in Control and Information Sciences, 2013, , 21-53.	1.0	65
42	Sliding mode control of DC/DC converters. Journal of the Franklin Institute, 2013, 350, 2146-2165.	3.4	189
43	Recasting the HEV energy management problem into an infinite-time optimization problem including stability. , 2013, , .		5
44	Self-optimization of photovoltaic system power generation based on sliding mode control. , 2012, , .		14
45	Discrete-time sliding mode regulator for nonminimum phase systems. , 2012, , .		1
46	Parameters estimation using sliding mode observer with shift operator. Journal of the Franklin Institute, 2012, 349, 1509-1525.	3.4	20
47	Adaptive super-twist control with minimal chattering effect. , 2011, , .		13
48	Prevention of emergency situations with sliding mode control. , 2010, , .		2
49	Sliding Modes for the Simulation of Mechanical and Electrical Systems Defined by Differential-Algebraic Equations. Journal of Computational and Nonlinear Dynamics, 2010, 5, .	1.2	0
50	Design of first- and second-order sliding mode observers for induction motors using a stator-flux model. International Journal of Control, 2010, 83, 1457-1464.	1.9	5
51	Sliding mode PID control of buck converters. , 2009, , .		13
52	Multiphase power boost converters with sliding mode. , 2009, , .		2
53	Chattering reduction using multiphase sliding mode control. International Journal of Control, 2009, 82, 1720-1737.	1.9	83
54	Simultaneous State and Parameter Estimation in Induction Motors Using First- and Second-Order Sliding Modes. IEEE Transactions on Industrial Electronics, 2009, 56, 3369-3376.	7.9	93

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55	Sliding Mode Control: Mathematical Tools, Design and Applications. Lecture Notes in Mathematics, 2008, , 289-347.	0.2	41
56	Sliding Mode Pulsewidth Modulation. IEEE Transactions on Power Electronics, 2008, 23, 619-626.	7.9	64
57	Sliding mode based stator flux and speed observer for induction machines. , 2008, , .		3
58	Sliding mode control of DC/DC multiphase power converters. , 2008, , .		0
59	Simulation of constrained dynamic multibody systems using sliding mode control theory. , 2008, , .		0
60	A sliding mode adaptive MRAS speed estimator for induction motors. , 2008, , .		6
61	Boundary value problem order reduction in sliding mode - a power distribution method for hybrid power systems. , 2008, , .		0
62	State and parameter estimation in induction motors using sliding modes. , 2008, , .		3
63	An adaptive sliding mode observer for induction machines. , 2008, , .		8
64	Power split strategy for hybrid power system with capacitive energy buffer. International Journal of Modelling, Identification and Control, 2008, 3, 225.	0.2	0
65	Sliding Mode Pulse Width Modulation. Proceedings of the American Control Conference, 2007, , .	0.0	5
66	Chattering suppression methods in sliding mode control systems. Annual Reviews in Control, 2007, 31, 179-188.	7.9	514
67	Robust controller for synchronous generator with local load via VSC. International Journal of Electrical Power and Energy Systems, 2007, 29, 348-359.	5.5	20
68	The Chattering Analysis. , 2006, , .		24
69	Cost functional minimizing sliding mode control design. , 2006, , .		0
70	The Chattering Analysis. , 2006, , .		3
71	CHATTERING PROBLEM IN SLIDING MODE CONTROL SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 1.	0.4	68
72	Discrete time sliding mode, continuous time sliding mode and vector control of induction motors. International Journal of Control, 2002, 75, 901-909.	1.9	8

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73	On the dynamics and Lyapunov stability of constrained and embedded rigid bodies. International Journal of Control, 2002, 75, 408-420.	1.9	17
74	Sliding mode control on electro-mechanical systems. Mathematical Problems in Engineering, 2002, 8, 451-473.	1.1	148
75	First Stage of VSS: People and Events. , 2002, , 1-32.		15
76	On Robust VSS Nonlinear Servomechanism Problem. , 2002, , 343-363.		3
77	Decomposed control design for non-stationary plants subject to disturbances. International Journal of Control, 2001, 74, 1335-1352.	1.9	1
78	Developing a fault tolerant power-train control system by integrating design of control and diagnostics. International Journal of Robust and Nonlinear Control, 2001, 11, 1095-1114.	3.7	45
79	Shape control of distributed parameter reflectors using sliding mode control. , 2001, , .		5
80	Real-Time Implementation of Sliding Mode Observer for Synchronous Rectification of the Automotive Electrical Power Supply System. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2000, 122, 594-598.	1.6	5
81	VSS PREMISE IN XX CENTURY: EVIDENCES OF A WITNESS. , 2000, , .		3
82	On multi-input chattering-free second-order sliding mode control. IEEE Transactions on Automatic Control, 2000, 45, 1711-1717.	5.7	308
83	Window observers for linear systems. Mathematical Problems in Engineering, 2000, 6, 411-424.	1.1	1
84	Block Control Principle for Mechanical Systems. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2000, 122, 1-10.	1.6	32
85	Sensorless sliding-mode control of induction motors. IEEE Transactions on Industrial Electronics, 2000, 47, 1286-1297.	7.9	263
86	Nonlinear Estimator Design of Automotive Alternator Utilizing Battery Current and Speed Measurements. European Journal of Control, 2000, 6, 135-149.	2.6	5
87	Sliding mode tracking control of systems with unstable zero dynamics. , 1999, , 303-327.		14
88	A control engineer's guide to sliding mode control. IEEE Transactions on Control Systems Technology, 1999, 7, 328-342.	5.2	1,742
89	Sliding mode control design based on Ackermann's formula. IEEE Transactions on Automatic Control, 1998, 43, 234-237.	5.7	213
90	Sliding Mode Design for Two Mass System Based on Reduced Order Model. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 303-308.	0.4	0

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91	Robot Obstacle Avoidance in n-Dimensional Space Using Planar Harmonic Artificial Potential Fields. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 1997, 119, 160-166.	1.6	18
92	Adaptive simulation and control of variable-structure control systems in sliding regimes. Automatica, 1996, 32, 1037-1042.	5.0	44
93	Tracking the gradient of artificial potential fields: sliding mode control for mobile robots. International Journal of Control, 1996, 63, 417-432.	1.9	28
94	Sliding Mode Control for Active Steering of Cars. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1995, 28, 61-66.	0.4	7
95	Adaptive sliding mode control in discrete-time systems. Automatica, 1995, 31, 769-773.	5.0	342
96	A three-layered hierarchical path control system for mobile robots: Algorithms and experiments. Robotics and Autonomous Systems, 1995, 14, 133-147.	5.1	20
97	Linear and nonlinear controller design for robust automatic steering. IEEE Transactions on Control Systems Technology, 1995, 3, 132-143.	5.2	231
98	On the navigation of mobile robots in narrow passages: A general framework based on sliding mode theory. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1994, 27, 79-84.	0.4	3
99	Sliding mode control design principles and applications to electric drives. IEEE Transactions on Industrial Electronics, 1993, 40, 23-36.	7.9	1,602
100	Sliding Modes in Control and Optimization. , 1992, , .		4,575
101	Sliding mode control in dynamic systems. International Journal of Control, 1992, 55, 1029-1037.	1.9	354
102	Variable structure systems with sliding modes. IEEE Transactions on Automatic Control, 1977, 22, 212-222.	5.7	4,421
103	Chattering Analysis. , 0, , 107-121.		22
104	Sliding Mode Control for Industrial Controllers. , 0, , .		1
105	Super-twisting-based sliding mode control of drum boiler energy conversion systems. International Journal of Control, 0, , 1-10.	1.9	1