

Alessandro Pisano

List of Publications by Year in descending order

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136
papers

3,841
citations

186265

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138484

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all docs

137
docs citations

137
times ranked

2448
citing authors

#	ARTICLE	IF	CITATIONS
1	A survey of applications of second-order sliding mode control to mechanical systems. International Journal of Control, 2003, 76, 875-892.	1.9	624
2	Analysis of Chattering in Systems With Second-Order Sliding Modes. IEEE Transactions on Automatic Control, 2007, 52, 2085-2102.	5.7	305
3	Second-order sliding-mode control of container cranes. Automatica, 2002, 38, 1783-1790.	5.0	215
4	Sliding mode control: A survey with applications in math. Mathematics and Computers in Simulation, 2011, 81, 954-979.	4.4	175
5	Switched Observers for Switched Linear Systems With Unknown Inputs. IEEE Transactions on Automatic Control, 2011, 56, 681-686.	5.7	137
6	Tracking Control of the Uncertain Heat and Wave Equation via Power-Fractional and Sliding-Mode Techniques. SIAM Journal on Control and Optimization, 2011, 49, 363-382.	2.1	134
7	Boundary control of coupled reaction-diffusion processes with constant parameters. Automatica, 2015, 54, 80-90.	5.0	109
8	Robust Finite-Time Frequency and Voltage Restoration of Inverter-Based Microgrids via Sliding-Mode Cooperative Control. IEEE Transactions on Industrial Electronics, 2018, 65, 907-917.	7.9	107
9	Observer-Based Air Excess Ratio Control of a PEM Fuel Cell System via High-Order Sliding Mode. IEEE Transactions on Industrial Electronics, 2015, 62, 5236-5246.	7.9	106
10	Output-feedback control of an underwater vehicle prototype by higher-order sliding modes. Automatica, 2004, 40, 1525-1531.	5.0	101
11	Finite-Time Consensus With Disturbance Rejection by Discontinuous Local Interactions in Directed Graphs. IEEE Transactions on Automatic Control, 2015, 60, 1133-1138.	5.7	98
12	Consensus-Based Control for a Network of Diffusion PDEs With Boundary Local Interaction. IEEE Transactions on Automatic Control, 2016, 61, 2708-2713.	5.7	78
13	Boundary second-order sliding-mode control of an uncertain heat process with unbounded matched perturbation. Automatica, 2012, 48, 1768-1775.	5.0	75
14	Receding Horizon Adaptive Second-Order Sliding Mode Control for Doubly-Fed Induction Generator Based Wind Turbine. IEEE Transactions on Control Systems Technology, 2017, 25, 73-84.	5.2	61
15	Finite-Time Consensus on the Median Value With Robustness Properties. IEEE Transactions on Automatic Control, 2017, 62, 1652-1667.	5.7	60
16	Finite-time state observation for non-linear uncertain systems via higher-order sliding modes. International Journal of Control, 2009, 82, 1564-1574.	1.9	58
17	Digital second-order sliding mode control for uncertain nonlinear systems. Automatica, 2001, 37, 1371-1377.	5.0	56
18	On the ISS properties of a class of parabolic DPS TM with discontinuous control using sampled-in-space sensing and actuation. Automatica, 2017, 81, 447-454.	5.0	55

#	ARTICLE	IF	CITATIONS
19	Exponential Stabilization of the Uncertain Wave Equation via Distributed Dynamic Input Extension. IEEE Transactions on Automatic Control, 2011, 56, 212-217.	5.7	51
20	Switched/time-based adaptation for second-order sliding mode control. Automatica, 2016, 64, 126-132.	5.0	51
21	Finite-time consensus for switching network topologies with disturbances. Nonlinear Analysis: Hybrid Systems, 2013, 10, 83-93.	3.5	50
22	Contact force regulation in wire-actuated pantographs via variable structure control and frequency-domain techniques. International Journal of Control, 2008, 81, 1747-1762.	1.9	47
23	Variable-Order Fractional Operators for Adaptive Order and Parameter Estimation. IEEE Transactions on Automatic Control, 2014, 59, 798-803.	5.7	46
24	A Feedback-Based Approach to DVFS in Data-Flow Applications. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2009, 28, 1691-1704.	2.7	41
25	Performance Analysis of Second-Order Sliding-Mode Control Systems With Fast Actuators. IEEE Transactions on Automatic Control, 2007, 52, 1053-1059.	5.7	38
26	Continuous state-feedback tracking of an uncertain heat diffusion process. Systems and Control Letters, 2010, 59, 754-759.	2.3	38
27	Higher-Order Sliding Modes for the Output-Feedback Control of Nonlinear Uncertain Systems. , 2002, , 83-108.		36
28	Globally convergent real-time differentiation via second order sliding modes. International Journal of Systems Science, 2007, 38, 833-844.	5.5	34
29	Black-box position and attitude tracking for underwater vehicles by second-order sliding-mode technique. International Journal of Robust and Nonlinear Control, 2010, 20, 1594-1609.	3.7	30
30	Leader-Follower Synchronization and ISS Analysis for a Network of Boundary-Controlled Wave PDEs. , 2021, 5, 683-688.		30
31	On the second-order sliding mode control of nonlinear systems with uncertain control direction. Automatica, 2009, 45, 2982-2985.	5.0	29
32	A control theoretic approach to energy-efficient pipelined computation in MPSoCs. Transactions on Embedded Computing Systems, 2007, 6, 27.	2.9	28
33	On the Transfer Properties of the "Generalized Sub-Optimal" Second-Order Sliding Mode Control Algorithm. IEEE Transactions on Automatic Control, 2009, 54, 399-403.	5.7	28
34	Output Feedback Regulation of the Contact-Force in High-Speed Train Pantographs. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2004, 126, 82-87.	1.6	27
35	On the boundary control of coupled reaction-diffusion equations having the same diffusivity parameters. , 2014, , .		25
36	Load swing suppression in the 3-dimensional overhead crane via second-order sliding-modes. , 2010, , .		23

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37	Analysis and shaping of the self-sustained oscillations in relay controlled fractional-order systems. <i>Fractional Calculus and Applied Analysis</i> , 2013, 16, 93-108.	2.2	23
38	OUTPUT-FEEDBACK CONTROL OF CONTAINER CRANES: A COMPARATIVE ANALYSIS. <i>Asian Journal of Control</i> , 2003, 5, 578-593.	3.0	22
39	On the multi-input second-order sliding mode control of nonlinear uncertain systems. <i>International Journal of Robust and Nonlinear Control</i> , 2012, 22, 1765-1778.	3.7	22
40	Finite-time consensus for a network of perturbed double integrators by second-order sliding mode technique. , 2013, , .		22
41	Continuous and discrete state reconstruction for nonlinear switched systems via high-order sliding-mode observers. <i>International Journal of Systems Science</i> , 2011, 42, 725-735.	5.5	21
42	On-line adaptive clustering for process monitoring and fault detection. <i>Expert Systems With Applications</i> , 2012, 39, 10226-10235.	7.6	21
43	Finite-time consensus on the median value by discontinuous control. , 2014, , .		19
44	On the Finite-Time Stabilization of Uncertain Nonlinear Systems With Relative Degree Three. <i>IEEE Transactions on Automatic Control</i> , 2007, 52, 2134-2141.	5.7	18
45	Anticollocated Backstepping Observer Design for a Class of Coupled Reaction-Diffusion PDEs. <i>Journal of Control Science and Engineering</i> , 2015, 2015, 1-10.	1.0	18
46	Second-order sliding mode approaches to disturbance estimation and fault detection in fractional-order systems. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011, 44, 2436-2441.	0.4	17
47	Parameter tuning and chattering adjustment of Super-Twisting sliding mode control system for linear plants. , 2012, , .		16
48	Sliding Mode-Based Robustification of Consensus and Distributed Optimization Control Protocols. <i>IEEE Transactions on Automatic Control</i> , 2021, 66, 1207-1214.	5.7	16
49	Contact force estimation and regulation in active pantographs: An algebraic observability approach. <i>Asian Journal of Control</i> , 2011, 13, 761-772.	3.0	15
50	Recent advances in sliding-mode based consensus strategies. , 2014, , .		15
51	Discontinuous dynamical systems for fault detection. A unified approach including fractional and integer order dynamics. <i>Mathematics and Computers in Simulation</i> , 2014, 95, 111-125.	4.4	15
52	Global output-feedback tracking and load disturbance rejection for electrically-driven robotic manipulators with uncertain dynamics. <i>International Journal of Control</i> , 2003, 76, 1201-1213.	1.9	14
53	Continuous finite-time stabilization for some classes of fractional order dynamics. , 2012, , .		13
54	Combined switched/time-based adaptation in second order sliding mode control. , 2013, , .		13

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55	Compressor surge active control via throttle and CCV actuators. A second-order sliding-mode approach. , 2008, , .		12
56	Boundary control and observer design for an uncertain wave process by second-order sliding-mode technique. , 2013, , .		12
57	Variable structure control of nonlinear sampled data systems by second order sliding modes. , 1999, , 43-67.		11
58	Second-order Sliding Mode Control with Adaptive Control Authority for the Tracking Control of Robotic Manipulators. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 10319-10324.	0.4	11
59	Adaptive Parameter Estimation in LTI Systems. IEEE Transactions on Automatic Control, 2019, 64, 4188-4195.	5.7	10
60	Second-order sliding-mode control of the uncertain heat and wave equations. , 2010, , .		9
61	Second order sliding mode approaches to fault detection and control of infinite dimensional systems. , 2014, , .		9
62	Coordination of electric thermal systems for distributed demand-side management: A gossip-based cooperative approach. , 2016, , .		9
63	Robust consensus-based secondary voltage restoration of inverter-based islanded microgrids with delayed communications. , 2018, , .		9
64	On the Lyapunov-based second-order SMC design for some classes of distributed parameter systems. IMA Journal of Mathematical Control and Information, 2012, 29, 437-457.	1.7	8
65	Trapezoidal rule for numerical evaluation of fractional order integrals with applications to simulation and identification of fractional order systems. , 2012, , .		8
66	Finite-time consensus with disturbance attenuation for directed switching network topologies by discontinuous local interactions. , 2013, , .		8
67	Nonlinear Discrete-Time Algorithm for Fractional Derivatives Computation with Application to PI ^{1/4} Controller Implementation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 887-892.	0.4	8
68	Integral sliding modes for the robustification of consensus-based multi-agent based systems. , 2016, , .		8
69	Consensus-based leader-follower tracking for a network of perturbed diffusion PDEs via local boundary interaction**The research leading to these results has received funding from the research project "Modeling, control and experimentation of innovative thermal storage systems", funded by Sardinia regional government under grant agreement n. CRP-60193.. IFAC-PapersOnLine, 2016, 49, 228-233.	0.9	8
70	A discontinuous algorithm for distributed convex optimization. , 2016, , .		8
71	Time-based switched sliding mode control for yaw rate regulation in two-wheeled vehicles. , 2012, , .		7
72	Decentralized state estimation in connected systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 421-426.	0.4	7

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73	Robust Distributed Secondary Voltage Restoration Control of AC Microgrids under Multiple Communication Delays. <i>Energies</i> , 2021, 14, 1165.	3.1	7
74	Contact force regulation in wire-actuated pantographs via variable structure control. , 2007, , .		6
75	Global hierarchical observer for linear systems with unknown inputs. , 2008, , .		6
76	Adaptive unit-vector control of an uncertain heat diffusion process. <i>Journal of the Franklin Institute</i> , 2014, 351, 2062-2075.	3.4	6
77	Boundary control of coupled reaction-advection-diffusion equations having the same diffusivity parameter**The research leading to these results has received funding from the research project "Modeling, control and experimentation of innovative thermal storage systems", funded by Sardinia regional government under grant agreement n. CRP-60193. <i>IFAC-PapersOnLine</i> , 2016, 49, 86-91.	0.9	6
78	Voltage Restoration of Islanded Microgrids via Cooperative Second-Order Sliding Mode Control * *The research leading to these results has been supported by Region Sardinia (L.R.7/2007) CRP-7733 [â€œSviluppo, progettazione e realizzazione prototipale di sistemi di gestione e controllo ottimali per una Micro Smart Gridâ€œ]. <i>IFAC-PapersOnLine</i> , 2017, 50, 9637-9642.	0.9	6
79	Robust FDI in induction motors via second order sliding mode technique. , 2012, , .		5
80	Time-based adaptive second order sliding mode controller for wind energy conversion optimization. , 2014, , .		5
81	Robust distributed consensus on the median value for networks of heterogeneously perturbed agents. , 2016, , .		5
82	On the fixedâ€time consensus problem for nonlinear uncertain multiagent systems under switching topology. <i>International Journal of Robust and Nonlinear Control</i> , 2021, 31, 3841-3858.	3.7	5
83	Contact Force Regulation in Wire-Actuated Pantographs. , 2008, , 447-463.		5
84	Adaptive identification of the commensurate order in fractional processes by means of variable-order operators. , 2012, , .		4
85	Unknown-input observation techniques for infiltration and water flow estimation in open-channel hydraulic systems. <i>Control Engineering Practice</i> , 2012, 20, 1374-1384.	5.5	4
86	Detection of rotor broken bar and eccentricity faults in induction motors via second order sliding mode observer. , 2012, , .		4
87	Special Issue on â€œAdvances in Fractional Order Control and Estimationâ€œ. <i>Asian Journal of Control</i> , 2013, 15, 637-639.	3.0	4
88	Sliding-mode boundary control of a class of perturbed reaction-diffusion processes. , 2015, , .		4
89	Simplex sliding mode control for autonomous sixâ€DOF vehicles with monoâ€directional actuators: Robustness, stability, and implementation issues. <i>International Journal of Robust and Nonlinear Control</i> , 2019, 29, 529-549.	3.7	4
90	On an outputâ€feedback stabilization problem with uncertainty in the relative degree. <i>International Journal of Robust and Nonlinear Control</i> , 2008, 18, 741-755.	3.7	3

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91	Cascade control of PM-DC drives via second-order sliding mode technique. , 2008, , .		3
92	A Comprehensive Analysis of Chattering in Second Order Sliding Mode Control Systems. , 2008, , 23-49.		3
93	Boundary second-order sliding-mode control of an uncertain heat process with spatially varying diffusivity. , 2011, , .		3
94	Frequency-domain analysis of self-excited oscillations for a class of multivariable relay systems. , 2013, , .		3
95	Combined Backstepping/Second-Order Sliding-Mode Boundary Stabilization of an Unstable Reactionâ€“Diffusion Process. , 2020, 4, 391-396.		3
96	Time-Optimal Stabilization for a Third-Order Integrator: a Robust State-Feedback Implementation. , 2002, , 131-144.		3
97	On the Robust Distributed Secondary Control of Islanded Inverter-Based Microgrids. Studies in Systems, Decision and Control, 2020, , 309-357.	1.0	3
98	Model Predictive Operation Control of Islanded Microgrids under Nonlinear Conversion Losses of Storage Units. Electricity, 2022, 3, 33-50.	2.8	3
99	Non-Linear Feedback Control for Energy Efficient On-Chip Streaming Computation. , 2006, , .		2
100	Observation of a class of quasilinear systems by quasi-continuous high-order sliding modes. , 2008, , .		2
101	Compressor Surge Suppression by Second-Order Sliding Mode Control Technique. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 6238-6244.	0.4	2
102	Finite-time observation of the continuous and discrete state for a class of nonlinear switched dynamics. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 358-363.	0.4	2
103	Consensus based decentralized estimation for linear plants with unknown inputs. , 2010, , .		2
104	Why template self-update should work in biometric authentication systems?. , 2012, , .		2
105	Sliding-mode boundary control of uncertain reaction-diffusion processes with spatially varying parameters. , 2012, , .		2
106	Finite-Time Consensus based Clock Synchronization by Discontinuous Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 172-177.	0.4	2
107	A new approach to causal output tracking for non-minimum phase nonlinear systems via combined first/second order sliding mode control. , 2013, , .		2
108	Output-feedback control of an underwater vehicle prototype by higher-order sliding modes*1. Automatica, 2004, 40, 1525-1525.	5.0	1

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109	Sliding mode control of nonlinear uncertain systems with relative degree two and uncertain control direction. , 2008, , .		1
110	Distributed-parameter second-order sliding-mode control techniques for the uncertain heat and wave equations. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 762-767.	0.4	1
111	Unknown-input observation techniques in Open Channel Hydraulic Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 1151-1156.	0.4	1
112	Pseudo-recursive Trapezoidal Rule for the Numerical Solution of Linear Fractional Differential Equations * *The work of A. Pisano, D. Nesi and R. Garrappa has been supported by the Italian Ministry of University and Research (MIUR) under project "Non integer order systems in modelling and control", Grant no. 2009F4NZJP. A. Pisano also acknowledges funding from the European Union Seventh Framework Programme (FP7/2007-2013) Network of excellence "HYCON2-Highly-complex and networked control systems" under gra. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 881-886.	0.4	1
113	Least squares methods * *M. Rapaic and Z.D. Jelenc acknowledge the financial support of Serbian Ministry of Science and Education, grants no. 32018 and 33013 A. Pisano has been supported by the Italian Ministry of University and Research (MIUR) under PRIN project "Non integer order systems in modeling and control", grant no. 2009F4NZJP. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 881-886.	0.4	1
114	Disturbance attenuation in nonlinear perturbed diffusion processes by sampled-in-space sensing and actuation. , 2014, , .		1
115	On the boundary control of distributed parameter systems by second-order sliding-mode technique. Recent advances and new results. , 2014, , .		1
116	Retaining Connectivity In Mobile Communication Mesh Networks. IFAC-PapersOnLine, 2017, 50, 800-807.	0.9	1
117	High Accuracy Sigma-Delta Modulator implementations via Suboptimal Quasi-Sliding Mode Control. , 2018, , .		1
118	Adaptive unit-vector law with time-varying gain for finite-time parameter estimation in LTI systems. Applied Numerical Mathematics, 2020, 155, 16-28.	2.1	1
119	Distributed Finite-Time Secondary Control of Islanded Microgrids by Coupled Sliding-Mode Technique. , 2020, , .		1
120	Robust Distributed Optimal Secondary Voltage Control in Islanded Microgrids with Time-Varying Multiple Delays. , 2020, , .		1
121	Output-Feedback Control of an Underwater Vehicle Prototype: Theory and Experiments. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 449-454.	0.4	0
122	ON THE FINITE-TIME STABILIZATION OF A NONLINEAR UNCERTAIN DYNAMICS VIA SWITCHED CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 276-282.	0.4	0
123	On an output-feedback stabilization problem with uncertainty in the relative degree. , 2007, , .		0
124	Finite-time state observation for nonlinear systems with application to compressor surge detection: a high order sliding-mode approach. , 2008, , .		0
125	On the transfer properties of second-order sliding mode control systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 3823-3829.	0.4	0
126	State observation for quasi-linear uncertain systems by nested high-order sliding mode observer. , 2009, , .		0

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127	Lyapunov-based second-order sliding mode control for a class of uncertain reaction-diffusion processes. , 2011, , .		0
128	Robust stabilization of an uncertain diffusion process with boundary control and sensing. , 2012, , .		0
129	Distributed tracking control of an uncertain heat diffusion process. , 2012, , .		0
130	An adaptive scheme for delay estimation in fractional order systems. , 2014, , .		0
131	Multiple fault diagnosis by signature recognition of time-varying residuals. , 2016, , .		0
132	Distributed Robust Finite-time Non-linear Consensus Protocol for High-order Multi-agent Systems via Coupled Sliding Mode Control. , 2019, , .		0
133	Adaptive parameter estimation for infinite-dimensional LTI systems with finite-time convergence. , 2019, , .		0
134	On the Finite-Time Stabilization of a Nonlinear Uncertain Dynamics VIA Switched Control. , 2006, , 276-282.		0
135	Robustification of Cooperative Consensus Algorithms in Perturbed Multi-agents Systems. Studies in Systems, Decision and Control, 2018, , 247-267.	1.0	0
136	Sliding-Mode Boundary Control of an In-Line Heating System Governed by Coupled PDE/ODE Dynamics. IEEE Transactions on Control Systems Technology, 2022, 30, 2689-2697.	5.2	0