Arie Levant

List of Publications by Citations

88 papers	11,106 citations	27 h-index	93 g-index
93 ext. papers	13,840 ext. citations	3 avg, IF	7.21 L-index

#	Paper	IF	Citations
88	Higher-order sliding modes, differentiation and output-feedback control. *International Journal of Control*, **2003**, 76, 924-941	1.5	2285
87	Sliding order and sliding accuracy in sliding mode control. *International Journal of Control*, **1993**, 58, 1247-1263	1.5	1954
86	Robust exact differentiation via sliding mode technique. *Automatica*, **1998**, 34, 379-384	5.7	1480
85	Sliding Mode Control and Observation. *Control Engineering*, **2014**,	1	783
84	Second-order sliding-mode observer for mechanical systems. *IEEE Transactions on Automatic Control*, **2005**, 50, 1785-1789	5.9	735
83	Homogeneity approach to high-order sliding mode design. *Automatica*, **2005**, 41, 823-830	5.7	646
82	Principles of 2-sliding mode design. *Automatica*, **2007**, 43, 576-586	5.7	564
81	Smooth second-order sliding modes: Missile guidance application. *Automatica*, **2007**, 43, 1470-1476	5.7	419
80	Quasi-continuous high-order sliding-mode controllers. *IEEE Transactions on Automatic Control*, **2005**, 50, 1812-1816	5.9	395
79	Chattering Analysis. *IEEE Transactions on Automatic Control*, **2010**, 55, 1380-1389	5.9	282
78	Simple homogeneous sliding-mode controller. *Automatica*, **2016**, 67, 22-32	5.7	148
77	Observation of linear systems with unknown inputs via high-order sliding-modes. *International Journal of Systems Science*, **2007**, 38, 773-791	2.3	140
76	Aircraft Pitch Control via Second-Order Sliding Technique. *Journal of Guidance, Control, and Dynamics*, **2000**, 23, 586-594	2.1	104
75	Exact Differentiation of Signals With Unbounded Higher Derivatives. *IEEE Transactions on Automatic Control*, **2012**, 57, 1076-1080	5.9	84
74	High-order sliding-mode control for blood glucose: Practical relative degree approach. *Control Engineering Practice*, **2013**, 21, 747-758	3.9	73
73	Adjustment of high-order sliding-mode controllers. *International Journal of Robust and Nonlinear Control*, **2009**, 19, 1657-1672	3.6	70
72	Weighted homogeneity and robustness of sliding mode control. *Automatica*, **2016**, 72, 186-193	5.7	56

71	Proper discretization of homogeneous differentiators. *Automatica*, **2014**, 50, 2007-2014	5.7	54
70	High-order sliding-mode observation for linear systems with unknown inputs. *Nonlinear Analysis: Hybrid Systems*, **2011**, 5, 189-205	4.5	52
69	Accuracy of Homogeneous Sliding Modes in the Presence of Fast Actuators. *IEEE Transactions on Automatic Control*, **2010**, 55, 810-814	5.9	46
68	Generalized homogeneous quasi-continuous controllers. *International Journal of Robust and Nonlinear Control*, **2008**, 18, 385-398	3.6	41
67	Realization and Discretization of Asymptotically Stable Homogeneous Systems. *IEEE Transactions on Automatic Control*, **2017**, 62, 5962-5969	5.9	39
66	Globally convergent differentiators with variable gains. *International Journal of Control*, **2018**, 91, 1994-2008	2.5	38
65	Output-feedback finite-time stabilization of disturbed LTI systems. *Automatica*, **2012**, 48, 606-611	5.7	38
64	Sliding-Mode-Based Differentiation and Filtering. *IEEE Transactions on Automatic Control*, **2018**, 63, 3061-3067	5.9	37
63	Exact Differentiation of Signals with Unbounded Higher Derivatives **2006**,		31
62	Adaptive second-order sliding mode control with uncertainty compensation. *International Journal of Control*, **2016**, 89, 1747-1758	1.5	28
61	Globally convergent fast exact differentiator with variable gains **2014**,		27
60	Uncertain disturbances attenuation by homogeneous multi-input multi-output sliding mode control and its discretisation. *IET Control Theory and Applications*, **2015**, 9, 515-525	2.5	24
59	Accelerated Twisting Algorithm. *IEEE Transactions on Automatic Control*, **2015**, 60, 2803-2807	5.9	22
58	Robust exact finite-time output based control using high-order sliding modes. *International Journal of Systems Science*, **2011**, 42, 1847-1857	2.3	22
57	Non-homogeneous finite-time-convergent differentiator **2009**,		22
56	Quasi-Continuous MIMO Sliding-Mode Control. *IEEE Transactions on Automatic Control*, **2018**, 63, 3068-3074	5.9	21
55	Delay estimation via sliding mode for nonlinear time-delay systems. *Automatica*, **2018**, 89, 266-273	5.7	21
54	Discrete differentiators based on sliding modes. *Automatica*, **2020**, 112, 108633	5.7	21

53	High-Order Sliding-Mode Observation and Identification for Linear Systems with Unknown Inputs **2006**,		20
52	Robust exact filtering differentiators. *European Journal of Control*, **2020**, 55, 33-44	2.5	19
51	Sliding-Mode-Based Differentiation and Its Application. *IFAC-PapersOnLine*, **2017**, 50, 1699-1704	0.7	18
50	Stability and robustness of homogeneous differential inclusions **2016**,		17
49	Higher-Order Sliding Mode Controllers and Differentiators. *Control Engineering*, **2014**, 213-249	1	15
48	High-order sliding-mode observation and fault detection **2007**,		12
47	Construction principles of output-feedback 2-sliding mode design		12
46	Filtering Differentiators and Observers **2018**,		12
45	A New Varying-Gain-Exponent-Based Differentiator/Observer: An Efficient Balance Between Linear and Sliding-Mode Algorithms. *IEEE Transactions on Automatic Control*, **2020**, 65, 5407-5414	5.9	10
44	Accuracy of disturbed homogeneous sliding modes **2014**,		8
43	Practical Relative Degree Approach in Sliding-Mode Control. *Lecture Notes in Control and Information Sciences*, **2013**, 97-115	0.5	8
42	Finite-Time Stability and High Relative Degrees in Sliding-Mode Control. *Lecture Notes in Control and Information Sciences*, **2011**, 59-92	0.5	8
41	High-Order Sliding-Mode Observer for Linear Systems with Unknown Inputs		8
40	Output-feedback control of the contact-force in high-speed-train pantographs		8
39	Second-Order Sliding Mode Controllers and Differentiators. *Control Engineering*, **2014**, 143-182	1	7
38	Robustness of Homogeneous Sliding Modes to Relative Degree Fluctuations. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 167-172		7
37	UNIVERSAL OUTPUT-FEEDBACK SISO CONTROLLERS. *Asian Journal of Control*, **2008**, 5, 484-497	1.7	7
36	Acceleration of finite-time stable homogeneous systems. *International Journal of Robust and Nonlinear Control*, **2018**, 28, 1757-1777	3.6	7

35	Non-Lyapunov homogeneous SISO control design **2017**,		6
34	Twisting-controller gain adaptation **2011**,		6
33	Filtering homogeneous observers in control of integrator chains. *International Journal of Robust and Nonlinear Control*, **2021**, 31, 3658-3685	3.6	6
32	New families of high-order sliding-mode controllers **2015**,		5
31	Ultimate robustness of homogeneous sliding modes **2010**,		5
30	Finite-time stabilization of uncertain SISO systems **2007**,		5
29	Discrete-Time Sliding-Mode-Based Differentiation. *Lecture Notes in Control and Information Sciences* , **2013**, 299-312	0.5	4
28	Homogeneous discrete differentiation of functions with unbounded higher derivatives **2013**,		4
27	High-order sliding-mode observation and fault detection via weakly unobservable subspace reconstruction **2007**,		4
26	High-Order Sliding-Mode Observer for Linear Systems with Unknown Inputs **2006**,		4
25	Supervisory acceleration of convergence for homogeneous systems. *International Journal of Control*, **2018**, 91, 2524-2534	1.5	3
24	Homogeneity of differential inclusions: Application to sliding modes **2015**,		3
23	Finite-time stabilization of uncertain MIMO systems **2014**,		3
22	Practical relative degree in black-box control **2012**,		3
21	High-Order Sliding-Mode control of blood glucose concentration via practical relative degree identification **2011**,		3
20	Speed regulation of induction motors: a sliding mode observer-differentiator based control scheme		3
19	Non-chattering discrete differentiators based on sliding modes **2020**,		3
18	Switched gain differentiator with fixed-time convergence. *IFAC-PapersOnLine*, **2017**, 50, 7145-7150	0.7	2

17	Disturbance Observer Based Control: Aerospace Applications. *Control Engineering*, **2014**, 291-320	1	2
16	Observation and Identification via HOSM Observers. *Control Engineering*, **2014**, 251-290	1	2
15	Gain-scheduled high-order MIMO sliding mode control **2010**,		2
14	Homogeneous High-Order Sliding Modes. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 210-215		2
13	High-order sliding modes observation **2008**,		2
12	High-order sliding observation and fault detection **2008**,		2
11	Homogeneous High-Order Sliding Modes. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 3799-3810		2
10	New Homogeneous Controllers and Differentiators. *Studies in Systems, Decision and Control*, **2020**, 3-28	0.8	2
9	ADJUSTMENT OF HIGH-ORDER SLIDING-MODE CONTROLLERS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 866-871		2
8	Homogeneous filtering and differentiation based on sliding modes **2019**,		2
7	Discontinuous Homogeneous Control **2008**, 71-95		1
6	Delay estimation for nonlinear time-delay systems **2016**,		1
5	On Robust Output Based Finite-Time Control of LTI systems using HOSMs. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 222-227		0
4	Homogeneous Sliding Modes in Noisy Environments. *Studies in Systems, Decision and Control*, **2021**, 1-46	0.8	0
3	Low-chattering discretization of homogeneous differentiators. *IEEE Transactions on Automatic Control*, **2021**, 1-1	5.9	0
2	Homogeneous Output-Feedback Control. *IFAC-PapersOnLine*, **2020**, 53, 5081-5086	0.7	
1	Development of Relative Degree Based Aerospace Sliding Mode Control MATLAB Toolbox with Case Studies. *IEEE Aerospace and Electronic Systems Magazine*, **2022**, 1-1	2.4	