Boris Andrievsky

List of Publications by Year
in descending order

131 papers	1,854 citations	361413 20 h-index	315739 38 g-index
136 all docs	136 docs citations	136 times ranked	904 citing authors

#	Article	IF	Citations
1	Control of Chaos: Methods and Applications. I. Methods. Automation and Remote Control, 2003, 64, 673-713.	0.8	179
2	Control of Chaos: Methods and Applications. II. Applications. Automation and Remote Control, 2004, 65, 505-533.	0.8	134
3	Method of passification in adaptive control, estimation, and synchronization. Automation and Remote Control, 2006, 67, 1699-1731.	0.8	80
4	Control and estimation under information constraints: Toward a unified theory of control, computation and communications. Automation and Remote Control, 2010, 71, 572-633.	0.8	72
5	Synchronization and phase relations in the motion of two-pendulum system. International Journal of Non-Linear Mechanics, 2007, 42, 895-901.	2.6	69
6	Chaotic observer-based synchronization under information constraints. Physical Review E, 2006, 73, 066209.	2.1	57
7	Adaptive Control of 3DOF Motion for LAAS Helicopter Benchmark: Design and Experiments. Proceedings of the American Control Conference, 2007, , .	0.0	57
8	Control of chaos: methods and applications in mechanics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2006, 364, 2279-2307.	3.4	55
9	Adaptive Observer-Based Synchronization of Chaotic Systems With First-Order Coder in the Presence of Information Constraints. IEEE Transactions on Circuits and Systems I: Regular Papers, 2008, 55, 1685-1694.	5.4	51
10	Estimation and Control Under Information Constraints for LAAS Helicopter Benchmark. IEEE Transactions on Control Systems Technology, 2010, 18, 1180-1187.	5.2	49
11	Hidden oscillations in aircraft flight control system with input saturation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 75-79.	0.4	49
12	Adaptive synchronization methods for signal transmission on chaotic carriers. Mathematics and Computers in Simulation, 2002, 58, 285-293.	4.4	44
13	Synchronization of Passifiable Lurie Systems Via Limited-Capacity Communication Channel. IEEE Transactions on Circuits and Systems I: Regular Papers, 2009, 56, 430-439.	5.4	44
14	Combined Adaptive Controller for UAV Guidance. European Journal of Control, 2005, 11, 71-79.	2.6	43
15	Control of the coupled double pendulums system. Mechatronics, 2005, 15, 1289-1303.	3.3	39
16	Controlled synchronization under information constraints. Physical Review E, 2008, 78, 036210.	2.1	38
17	Synchronization of nonlinear systems under information constraints. Chaos, 2008, 18, 037109.	2.5	33
18	Passification based synchronization of nonlinear systems under communication constraints and bounded disturbances. Automatica, 2015, 55, 287-293.	5.0	33

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19	Aircraft control with anti-windup compensation. Differential Equations, 2012, 48, 1700-1720.	0.7	32
20	FEEDBACK RESONANCE IN SINGLE AND COUPLED 1-DOF OSCILLATORS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1999, 09, 2047-2057.	1.7	25
21	Passification-based robust flight control design. Automatica, 2011, 47, 2743-2748.	5.0	24
22	Global stabilization of the unstable Reaction-Wheel Pendulum. Automation and Remote Control, 2011, 72, 1981-1993.	0.8	21
23	ADAPTIVE PASSIFICATION-BASED FAULT-TOLERANT FLIGHT CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 715-720.	0.4	17
24	State estimation and synchronization of pendula systems over digital communication channels. European Physical Journal: Special Topics, 2014, 223, 773-793.	2.6	17
25	Feedback control for some solutions of the sine-Gordon equation. Applied Mathematics and Computation, 2015, 269, 17-22.	2.2	17
26	Combined adaptive autopilot for an UAV flight control. , 0, , .		16
27	Dynamics and control of oscillations in a complex crystalline lattice. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 353, 24-29.	2.1	16
28	Passificationâ€•based adaptive control of linear systems: Robustness issues. International Journal of Adaptive Control and Signal Processing, 2008, 22, 590-608.	4.1	16
29	Randomized Algorithm for UAVs Group Flight Optimization. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 205-208.	0.4	16
30	Energy control of distributed parameter systems via speed-gradient method: case study of string and sine-Gordon benchmark models. International Journal of Control, 2017, 90, 2554-2566.	1.9	16
31	Adaptive Control Design and Experiments for LAAS â€œHelicopterâ€•Benchmark. European Journal of Control, 2008, 14, 329-339.	2.6	15
32	Aircraft wing rock oscillations suppression by simple adaptive control. Aerospace Science and Technology, 2020, 105, 106049.	4.8	15
33	Multipendulum mechatronic setup: Design and experiments. Mechatronics, 2012, 22, 76-82.	3.3	14
34	Output Feedback Energy Control of the Sine-Gordon PDE Model Using Collocated Spatially Sampled Sensing and Actuation. IEEE Transactions on Automatic Control, 2020, 65, 1484-1498.	5.7	13
35	ROBUST PASSIFICATION VIA STATIC OUTPUT FEEDBACK â€" LMI RESULTS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 820-825.	0.4	12
36	Control of Phase Shift in Two-Rotor Vibration Units. IEEE Transactions on Control Systems Technology, 2021, 29, 1316-1323.	5.2	12

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37	Information transmission by adaptive synchronization with chaotic carrier and noisy channel. , 0, , .		11
38	Kink and solitary waves may propagate together. Physical Review E, 2012, 85, 046604.	2.1	11
39	Vehicle speed estimation using roadside sensors. , 2014, , .		11
40	STATE ESTIMATION OVER THE LIMITED-BAND COMMUNICATION CHANNEL FOR PITCH MOTION CONTROL OF LAAS HELICOPTER BENCHMARK1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 407-412.	0.4	10
41	Robust Simple Adaptive Control with Relaxed Passivity and PID control of a Helicopter Benchmark. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 2315-2320.	0.4	10
42	Switching algorithm for data fusion of small low-cost UAV navigation system. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 206-211.	0.4	10
43	Observer-based boundary control of the sineâ€"Gordon model energy. Automatica, 2020, 113, 108682.	5.0	10
44	Robustness of Pecoraâ€"Carroll synchronization under communication constraints. Systems and Control Letters, 2018, 111, 27-33.	2.3	10
45	Adaptive control experiments for LAAS "helicopter" benchmark. , 0, , .		9
46	Solitary wave interactions and reshaping in coupled systems. Wave Motion, 2011, 48, 773-781.	2.0	9
47	Passification based signal-parametric adaptive controller for agents in formationâˆ—âˆ—The work was performed in the IPME RAS, supported by RSF (grant 14-29-00142).. IFAC-PapersOnLine, 2015, 48, 222-226.	0.9	9
48	Recursive Identification of Motion Model Parameters for ultralight UAVâˆ—âˆ—The work was performed in IPME RAS, supported by RSF (grant 14-29-00142).. IFAC-PapersOnLine, 2015, 48, 233-237.	0.9	9
49	Boundary Energy Control of the Sine-Gordon Equation**This work was performed in IPME RAS, supported by RSF (grant 14-29-00142).. IFAC-PapersOnLine, 2016, 49, 148-153.	0.9	9
50	Adaptive observer-based synchronization of the nonlinear nonpassifiable systems. Automation and Remote Control, 2007, 68, 1186-1200.	0.8	8
51	Hidden Oscillations In The Closed-Loop Aircraft-Pilot System And Their Prevention* *This work was supported by Russian Science Foundation (project 14-21-00041) and Saint-Petersburg State University.. IFAC-PapersOnLine, 2016, 49, 30-35.	0.9	8
52	Boundary energy control of a system governed by the nonlinear Kleinâ€"Gordon equation. Mathematics of Control, Signals, and Systems, 2018, 30, 1.	2.3	8
53	Singular perturbations of systems controlled by energy-speed-gradient method. , 2004, , .		7
54	Computation of the Excitability Index for Linear Oscillators. , 0, , .		7

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55	Passification-Based Adaptive Control with Implicit Reference Model*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 342-350.	0.4	7
56	Adaptive Identification of Angular Motion Model Parameters for LAAS Helicopter Benchmark. Control Applications (CCA), Proceedings of the IEEE International Conference on, 2007, , .	0.0	7
57	Control of wave motion in the chain of pendulums. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 3136-3141.	0.4	7
58	State estimation of passifiable lurie systems via limited-capacity communication channel. , 2009, , .		7
59	Convergence based anti-windup design method and its application to flight control. , 2012, , .		7
60	Simple adaptive control of quadrotor attitude. Algorithms and experimental results. , 2017, , .		7
61	Development and Simulation of Motion Control System for Small Satellites Formation. Electronics (Switzerland), 2021, 10, 3111.	3.1	7
62	Adaptive Coding for Transmission of Position Information Over the Limited-band Communication Channel1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 447-452.	0.4	6
63	Teaching of robotics and control jointly in the University and in the high school based on LEGO Mindstorms NXT. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 9824-9829.	0.4	6
64	Adaptive coding for maneuvering UAV tracking over the digital communication channel. , 2014, , .		6
65	Control of pneumatically actuated 6-DOF Stewart platform for driving simulator. , 2014, , .		6
66	Control methods for localization of nonlinear waves. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160212.	3.4	6
67	Formation control of a group of unmanned aerial vehicles with data exchange over a packet erasure channel. , 2018, , .		6
68	Shunting Method for Control of Homing Missiles with Uncertain Parameters. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 593-598.	0.4	5
69	Observer-based synchronization of discrete-time chaotic systems under communication constraints. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 3719-3724.	0.4	5
70	Discrete-event implementation of observer-based feedback control of manufacturing system. , 2009, , .		5
71	Observer-based Production control of Manufacturing Machines. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 264-269.	0.4	5
72	Adaptive-based methods for information transmission by means of chaotic signal source modulation. Automation and Remote Control, 2011, 72, 1967-1980.	0.8	5

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73	Influence of coupling on nonlinear waves localization. Communications in Nonlinear Science and Numerical Simulation, 2011, 16, 3964-3970.	3.3	5
74	Vehicle classification using measurements from accelerometers mounted on the road surface. , 2014, , .		5
75	Adaptive Coding For Data Exchange Between Quadrotors In The Formation**The work was performed in the IPME RAS and supported by the Russian Science Foundation (grant 14-29-00142).. IFAC-PapersOnLine, 2016, 49, 275-280.	0.9	5
76	Mechatronic Laboratory Setup For Study Of Controlled Nonlinear Vibrations* *The work was performed in the IPME RAS and supported by the Russian Science Foundation (grant 14-29-00142). The sample-data control system analysis (Sec. 5.2) is supported by SPbSU (grant 6.38.230.2015). IFAC-PapersOnLine, 2016, 49, 1-6.	0.9	5
77	Passification based simple adaptive control of quadrotor attitude: Algorithms and testbed results. AIP Conference Proceedings, 2017, , .	0.4	5
78	Control of Two Satellites Relative Motion over the Packet Erasure Communication Channel with Limited Transmission Rate Based on Adaptive Coder. Electronics (Switzerland), 2020, 9, 2032.	3.1	5
79	NUMERICAL AND EXPERIMENTAL EXCITABILITY ANALYSIS OF MULTI-PENDULUM MECHATRONICS SYSTEM. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 55-60.	0.4	4
80	PASSIFICATION-BASED ADAPTIVE CONTROL : ROBUSTNESS ISSUES 1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 273-278.	0.4	4
81	ADAPTIVE OBSERVER-BASED SYNCHRONISATION OF CHAOTIC SYSTEMS IN PRESENCE OF INFORMATION CONSTRAINTS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 269-274.	0.4	4
82	Control and observation via communication channels with limited bandwidth. Gyroscopy and Navigation, 2010, 1, 126-133.	1.3	4
83	Stability and performance of networked control of quadrocopters formation flight. , 2014, , .		4
84	Adaptive Zooming Strategy in Discrete-time Implementation of Sliding-mode Controlâ—â—The work was performed in IPME RAS, supported by RSF (grant 14-29-00142).. IFAC-PapersOnLine, 2015, 48, 319-326.	0.9	4
85	Convergence-based Analysis of Robustness to Delay in Anti-windup Loop of Aircraft Autopilotâ—â—This work was supported by Russian Scientific Foundation (project 14-21-00041) and Saint-Petersburg State University.. IFAC-PapersOnLine, 2015, 48, 144-149.	0.9	4
86	Stabilization of PVTOL aircraft by supertwisting algorithms. , 2015, , .		4
87	Hybrid quantised observer for multi-input-multi-output nonlinear systems. , 2008, , .		3
88	Decentralized feedback control of a line of manufacturing machines. , 2009, , .		3
89	Behavior analysis of harmonically forced chain of pendulums. , 2009, , .		3
90	Adaptive coding for position estimation in formation flight control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 72-76.	0.4	3

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91	Nonlinear problems in control of manufacturing systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 33-42.	0.4	3
92	Control of MEMS Gyroscope Oscillation Using Speed Gradient Algorithm. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 1-4.	0.4	3
93	Rainbow Runner glider as a testbed for robust and adaptive control methods*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 270-275.	0.4	3
94	Hidden Nonlinear Oscillations in Controlled Aircraft With Saturated Inputs. , 2018, , .		3
95	Energy Synchronization of Pendulum Mechanisms. , 2018, , .		3
96	Adaptive control of quadrotors spatial motion in formation with implicit reference model. AIP Conference Proceedings, 2018, , .	0.4	3
97	Improved adaptive coding procedure for transferring the navigation data between UAVs in formation. AIP Conference Proceedings, 2018, , .	0.4	3
98	Optimization of the manned aircraft pitch angle control loop with actuator rate limitation and nonlinear correction. Journal of Physics: Conference Series, 2021, 1864, 012055.	0.4	3
99	Speed-gradient control of cooled atom dynamics in potential of standing wave. , 0, , .		2
100	Speed-gradient control of energy in singularly perturbed systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 979-984.	0.4	2
101	Singular Perturbation Analysis of Energy Control Systems. JVC/Journal of Vibration and Control, 2006, 12, 331-353.	2.6	2
102	Synchronization of passifiable Lurie systems via limited capacity communication channel. , 2008, , .		2
103	Application of passification method to controlled synchronization of tree networks under information constraints. , 2009, , .		2
104	Passification Based Synchronization of Nonlinear Systems Under Communication Constraintsâ‹†. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 6561-6566.	0.4	2
105	Frequency and time-domain analysis on performance of a production line operated by observer-based distributed control. International Journal of Systems Science, 2013, 44, 1885-1896.	5.5	2
106	Modeling, Simulation and Control of Pneumatically Actuated Stewart Platform with Input Quantization. , 2014, , .		2
107	Robust observers and Pecora-Carroll synchronization with limited information. , 2017, , .		2
108	Suppression of nonlinear wing-rock oscillations by adaptive control with the implicit reference model. AIP Conference Proceedings, 2018, , .	0.4	2

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109	Output Feedback Energy Control of String PDE Model. IFAC-PapersOnLine, 2019, 52, 138-143.	0.9	2
110	Parameter Estimation for Hindmarshâ€"Rose Neurons. Electronics (Switzerland), 2022, 11, 885.	3.1	2
111	Adaptive Multiple Synchronization and Phase Shift Control for Mechatronic Vibrational Setup. , 2022, , .		2
112	Modeling and synchronization of the mechatronic vibrational stand. , 0, , .		1
113	ANALYSIS OF A CHAOTIC SYNCHRONISATION SYSTEM UNDER INFORMATION CONSTRAINTS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 142-147.	0.4	1
114	Adaptive Parameter Identification for Simplified 3D-Motion Model of â€˜LAAS Helicopter Benchmark'1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 244-249.	0.4	1
115	9th IFAC Workshop â€œAdaptation and Learning in Control and Signal Processingâ€•(ALCOSP 2007) and 3rd IFAC Workshop â€œPeriodic Control Systemsâ€•(PSYCO 2007). Automation and Remote Control, 2008, 69, 733-736.	0.8	1
116	State estimation of complex oscillatory system with uniform quantization under data rate constraints. , 2012, , .		1
117	Quadrocopters Formation Control Over the Limited-band Communication Networkâˆ—âˆ—This work was performed in the IPME RAS and supported by the Russian Scientific Foundation (project 14-29-00142).. IFAC-PapersOnLine, 2015, 48, 85-90.	0.9	1
118	Synchronization and state estimation of nonlinear physical systems under communication constraints. , 2016, , .		1
119	CONTROL OF OSCILLATIONS IN MANUFACTURING NETWORKS. World Scientific Series on Nonlinear Science, Series B, 2010, , 121-130.	0.2	1
120	A non-quadratic criterion for stability of forced oscillations and its application to flight control. , 2013, , .		1
121	Phase relations in the synchronized motion of two-pendulum system. , 0, , .		0
122	Final comments by the authors. European Journal of Control, 2005, 11, 81.	2.6	0
123	Information Transmission by Means of Chaos-Based Frequency Modulation and Adaptive Identification. Control Applications (CCA), Proceedings of the IEEE International Conference on, 2007, , .	0.0	0
124	Final Comments by the Authors. European Journal of Control, 2008, 14, 341.	2.6	0
125	Passification-based robust flight control system design. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 66-71.	0.4	0
126	Nonlinear processing of accelerometer and magnetometer measurements for vehicles monitoringâˆ—âˆ—This work was partially financially supported by Government of Russian Federation, Grant 074-U01, by the Ministry of Education and Science of Russian Federation (Project 14.Z50.31.0031) and by the Russian Foundation for Basic Research (Proj. N 13-0800925). The first author is grateful to Professor Wolfgang Birk, without whose help and support this article would not even exist and PhD Student Roland Hostettler, both. IFAC-PapersOnLine, 2015, 48, 484-488.	0.9	0

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127	UAV control with switched GNSS-Estimator navigation systemâˆ—âˆ—This work was supported by Russian Scientific Foundation (project 14-21-00041) and Saint-Petersburg State University.. IFAC-PapersOnLine, 2015, 48, 126-131.	0.9	0
128	Energy-Conserving Algorithm for Earth Observation via GEO Satellite Radar. IEEE Geoscience and Remote Sensing Letters, 2016, , 1-3.	3.1	0
129	Information Transmission Over the Limited-rate Communication Channel by Chaotic Signal Modulation and Non-linear Observer.. IFAC-PapersOnLine, 2018, 51, 91-96.	0.9	0
130	Two-point Output Feedback Boundary Control for Semilinear Hyperbolic Systems. IFAC-PapersOnLine, 2019, 52, 54-59.	0.9	0
131	Identification of Human Model Parameters for the Human-Machine Control Systems Design. , 2022, , .		0