Anton Proskurnikov

List of Publications by Year
in descending order

130 papers	2,095 citations	471509 17 h-index	254184 43 g-index
131 all docs	131 docs citations	131 times ranked	1078 citing authors

#	Article	IF	Citations
1	A tutorial on modeling and analysis of dynamic social networks. Part I. Annual Reviews in Control, 2017, 43, 65-79.	7.9	322
2	Opinion Dynamics in Social Networks With Hostile Camps: Consensus vs. Polarization. IEEE Transactions on Automatic Control, 2016, 61, 1524-1536.	5.7	280
3	Network science on belief system dynamics under logic constraints. Science, 2016, 354, 321-326.	12.6	252
4	Novel Multidimensional Models of Opinion Dynamics in Social Networks. IEEE Transactions on Automatic Control, 2017, 62, 2270-2285.	5.7	226
5	A tutorial on modeling and analysis of dynamic social networks. Part II. Annual Reviews in Control, 2018, 45, 166-190.	7.9	180
6	A Guiding Vector-Field Algorithm for Path-Following Control of Nonholonomic Mobile Robots. IEEE Transactions on Control Systems Technology, 2018, 26, 1372-1385.	5.2	72
7	Average consensus in networks with nonlinearly delayed couplings and switching topology. Automatica, 2013, 49, 2928-2932.	5.0	37
8	Consensus in switching networks with sectorial nonlinear couplings: Absolute stability approach. Automatica, 2013, 49, 488-495.	5.0	37
9	Problems and methods of network control. Automation and Remote Control, 2016, 77, 1711-1740.	0.8	30
10	Synchronization of Pulse-Coupled Oscillators and Clocks Under Minimal Connectivity Assumptions. IEEE Transactions on Automatic Control, 2017, 62, 5873-5879.	5.7	30
11	Lyapunov Event-Triggered Stabilization With a Known Convergence Rate. IEEE Transactions on Automatic Control, 2020, 65, 507-521.	5.7	30
12	Opinion evolution in time-varying social influence networks with prejudiced agents. IFAC-PapersOnLine, 2017, 50, 11896-11901.	0.9	26
13	Dissipativity of T-Periodic Linear Systems. IEEE Transactions on Automatic Control, 2007, 52, 1039-1047.	5.7	21
14	Popov-Type Criterion for Consensus in Nonlinearly Coupled Networks. IEEE Transactions on Cybernetics, 2015, 45, 1537-1548.	9.5	21
15	Synchronization of Goodwin's Oscillators under Boundedness and Nonnegativeness Constraints for Solutions. IEEE Transactions on Automatic Control, 2017, 62, 372-378.	5.7	20
16	Learning Hidden Influences in Large-Scale Dynamical Social Networks: A Data-Driven Sparsity-Based Approach, in Memory of Roberto Tempo. IEEE Control Systems, 2021, 41, 61-103.	0.8	19
17	Mathematical Structures in Group Decision-Making on Resource Allocation Distributions. Scientific Reports, 2019, 9, 1377.	3.3	18
18	Consensus and polarization in Altafini's model with bidirectional time-varying network topologies. , 2014, , .		17

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19	Nonlinear Consensus Algorithms with Uncertain Couplings. Asian Journal of Control, 2014, 16, 1277-1288.	3.0	17
20	Simple synchronization protocols for heterogeneous networks: beyond passivity. IFAC-PapersOnLine, 2017, 50, 9426-9431.	0.9	17
21	Differential inequalities in multi-agent coordination and opinion dynamics modeling. Automatica, 2017, 85, 202-210.	5.0	16
22	Stability of continuous-time consensus algorithms for switching networks with bidirectional interaction. , 2013, , .		16
23	Problem of uniform deployment on a line segment for second-order agents. Automation and Remote Control, 2016, 77, 1248-1258.	0.8	15
24	Guiding vector field algorithm for a moving path following problem * *The work was supported in part by the European Research Council (ERC-StG-307207), the Netherlands Organization for Scientific Research (NWO-vidi-14134) and RFBR, grants 17-08-01728, 17-08-00715 and 17-08-01266. IFAC-PapersOnLine, 2017, 50, 6983-6988.	0.9	15
25	A new model of opinion dynamics for social actors with multiple interdependent attitudes and prejudices. , 2015, , .		14
26	Frequency-domain criteria for consensus in multiagent systems with nonlinear sector-shaped couplings. Automation and Remote Control, 2014, 75, 1982-1995.	0.8	11
27	Volterra Equations with Periodic Nonlinearities: Multistability, Oscillations and Cycle Slipping. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1950068.	1.7	11
28	Mathematical modeling of endocrine regulation subject to circadian rhythm. Annual Reviews in Control, 2018, 46, 148-164.	7.9	10
29	Evolution of clusters in large-scale dynamical networks. Cybernetics and Physics, 2018, , 102-129.	0.3	10
30	Opinion dynamics using Altafini's model with a time-varying directed graph. , 2014, , .		9
31	A general criterion for synchronization of incrementally dissipative nonlinearly coupled agents. , 2015, , .		9
32	Polarization in coopetitive networks of heterogeneous nonlinear agents. , 2016, , .		9
33	Dynamics and structure of social networks from a systems and control viewpoint: A survey of Roberto Tempo's contributions. Online Social Networks and Media, 2018, 7, 45-59.	3.6	8
34	Comprehending Complexity: Data-Rate Constraints in Large-Scale Networks. IEEE Transactions on Automatic Control, 2019, 64, 4252-4259.	5.7	8
35	Structural Balance via Gradient Flows Over Signed Graphs. IEEE Transactions on Automatic Control, 2021, 66, 3169-3183.	5.7	8
36	Dynamical Networks of Social Influence: Modern Trends and Perspectives. IFAC-PapersOnLine, 2020, 53, 17616-17627.	0.9	8

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37	A New Randomized Algorithm for Community Detection in Large Networks**The results of the paper have been obtained at IPME RAS under support of Russian Foundation for Basic Research (RFBR) grant 16-07-00890. IFAC-PapersOnLine, 2016, 49, 31-35.	0.9	7
38	Stability properties of the Goodwin-Smith oscillator model with additional feedback**The work was supported in part by the European Research Council (ERCStG-307207), RFBR, grant 14-08-01015 and St. Petersburg State University, grant 6.38.230.2015. Theorem 2 was obtained under sole support of Russian Science Foundation (RSF), grant 14-29-00142, at Institute for Problems in Mechanical Engineering RAS.. IFAC-PapersOnLine, 2016, 49, 131-136.	0.9	7
39	Modulus consensus in discrete-time signed networks and properties of special recurrent inequalities. , 2017, , .		7
40	Local and global analysis of endocrine regulation as a non-cyclic feedback system. Automatica, 2018, 91, 190-196.	5.0	7
41	Impulsive model of endocrine regulation with a local continuous feedback. Mathematical Biosciences, 2019, 310, 128-135.	1.9	7
42	Recurrent averaging inequalities in multi-agent control and social dynamics modeling. Annual Reviews in Control, 2020, 49, 95-112.	7.9	7
43	Lyapunov Design for Event-Triggered Exponential Stabilization. , 2018, , .		6
44	Macroscopic Noisy Bounded Confidence Models With Distributed Radical Opinions. IEEE Transactions on Automatic Control, 2021, 66, 1174-1189.	5.7	6
45	Universal regulators for optimal tracking of stochastic signals with an unknown spectral density. Doklady Mathematics, 2006, 74, 614-618.	0.6	5
46	Consensus in Networks of Integrators With Fixed Topology and Delayed Nonlinear Couplings. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 8945-8950.	0.4	5
47	Average consensus in switching nonlinearly coupled networks with time-varying delays.* *The paper was partially supported by RFBR, grants 11-08-01218 and 12-01-00808. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 457-461.	0.4	5
48	Asymptotic estimates for gradient-like distributed parameter systems with periodic nonlinearities. , 2014, , .		5
49	Phase locking, oscillations and cycle slipping in synchronization systems. , 2016, , .		5
50	Optimal controllers for rudder roll damping with an autopilot in the loop**The work was supported in part by the European Research Council (ERCStG-307207), RFBR, grant 14-08-01015 and Russian Federation President's Grant MD-6325.2016.8.. IFAC-PapersOnLine, 2016, 49, 562-567.	0.9	5
51	On Periodic Solutions of Singularly Perturbed Integro-differential Volterra Equations with Periodic Nonlinearities**The work was partly supported by RFBR (14-08-01015) and St. Petersburg State University, grant 6.38.230.2015. Theorem 1 is obtained under sole support of Russian Science Foundation grant 16-19-00057 at Institute for Problems of Mechanical Engineering RAS.. IFAC-PapersOnLine, 2016, 49, 160-165.	0.9	5
52	Pagerank and opinion dynamics: missing links and extensions. , 2016, , .		5
53	Tsypkin and Jury–Lee Criteria for Synchronization and Stability of Discrete-Time Multiagent Systems. Automation and Remote Control, 2018, 79, 1057-1073.	0.8	5
54	Positive contagion and the macrostructures of generalized balance. Network Science, 2019, 7, 445-458.	1.0	5

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55	Group dynamics on multidimensional object threat appraisals. Social Networks, 2021, 65, 157-167.	2.1	5
56	The problem of the invariance of a control system with respect to some of the output variables. Doklady Mathematics, 2006, 73, 142-146.	0.6	4
57	DP Systems for Track Control of Dredging Vessels. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 453-458.	0.4	4
58	Universal controllers in model matching optimal control problems for unknown external signals. Journal of Computer and Systems Sciences International, 2012, 51, 214-227.	0.6	4
59	Average consensus for nonlinearly coupled agents: quadratic criteria. , 2014, , .		4
60	A new extension of the infinite-dimensional KYP lemma in the coercive caseâ—âˆ—The paper was partially supported by RFBR, grants 13-0801014 and 14-08-01015, and St. Petersburg State University, grant 6.38.230.2015. Theorem 10 in Section 4 is supported solely by Russian Scientific Foundation (RSF), grant 14-29-00142.. IFAC-PapersOnLine, 2015, 48, 246-251.	0.9	4
61	Consensus in nonlinear stationary networks with identical agents. Automation and Remote Control, 2015, 76, 1551-1565.	0.8	4
62	An impulsive model of endocrine regulation with two negative feedback loops * *The work was supported in part by the European Research Council (ERC-StG-307207). IFAC-PapersOnLine, 2017, 50, 14717-14722.	0.9	4
63	Bounded Input Dissipativity of Linearized Circuit Models. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 2064-2077.	5.4	4
64	Consensus-based Distributed Algorithm for Multisensor-Multitarget Tracking under Unknownâ€"butâ€"Bounded Disturbances. IFAC-PapersOnLine, 2020, 53, 3589-3595.	0.9	4
65	Universal regulators for optimal tracking of polyharmonic signals in systems with delays. Doklady Mathematics, 2006, 73, 147-151.	0.6	3
66	Linear control systems with a reference model. Doklady Mathematics, 2007, 76, 634-637.	0.6	3
67	The problem of absolute invariance of a linear discrete-time control system. Doklady Mathematics, 2008, 78, 956-960.	0.6	3
68	Speed gradient control of qubit state*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 81-85.	0.4	3
69	Consensus in symmetric multi-agent networks with sector nonlinear couplings. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 1237-1242.	0.4	3
70	Signal invariance and trajectory steering problem for an autonomous wheeled robot. , 2011, , .		3
71	Thrust Ability Diagrams for Multi-Thruster Marine Vessels. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 152-157.	0.4	3
72	Universal controllers of V.A. Yakubovich: a systematic approach to LQR problems with uncertain external signalsâ—âˆ—The paper was partially supported by RFBR, grants 13-08-01014 and 14-08-01015, and St. Petersburg State University, grant 6.38.230.2015. Theorems 6 and 13 are obtained at Institute for Problems of Mechanical Engineering RAS and supported solely by Russian Scientific Foundation (RSF), grant 14-29-00142.. IFAC-PapersOnLine, 2015, 48, 557-562.	0.9	3

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73	Cycle slipping in nonlinear circuits under periodic nonlinearities and time delays. , 2015, , .		3
74	Event-based synchronization in biology: Dynamics of pulse coupled oscillators. , 2015, , .		3
75	Consensus robustness against inner delays. Electronic Notes in Discrete Mathematics, 2016, 51, 7-14.	0.4	3
76	Forced Solutions of Disturbed Pendulum-Like Lur'e Systems. , 2018, , .		3
77	Synchronization of networked oscillators under nonlinear integral coupling. IFAC-PapersOnLine, 2018, 51, 56-61.	0.9	3
78	Fast Simulation of Analog Circuit Blocks Under Nonstationary Operating Conditions. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 1355-1368.	2.5	3
79	Generalized Markovian Quantity Distribution Systems: Social Science Applications. Sociological Science, 0, 7, 487-503.	2.0	3
80	New Results on Delay Robustness of Consensus Algorithms. , 2020, , .		3
81	Self-synchronization of unbalanced rotors and the swing equation. IFAC-PapersOnLine, 2021, 54, 71-76.	0.9	3
82	Synthesis of an adaptive regulator in the stabilization of an uncertain discrete linear system. Doklady Mathematics, 2009, 79, 445-448.	0.6	2
83	Adaptive regulators for the control of an uncertain linear discrete-time system with a reference model. Doklady Mathematics, 2010, 82, 667-670.	0.6	2
84	Consensus in switching symmetric networks of first-order agents with delayed relative measurements. , 2013, , .		2
85	The Circle Criterion for Synchronization in Nonlinearly Coupled Networks.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 737-742.	0.4	2
86	The Popov Criterion For Consensus Between Delayed Agents. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 693-698.	0.4	2
87	Problem of cycle-slipping for infinite dimensional systems with MIMO nonlinearities. , 2014, , .		2
88	Consensus between nonlinearly coupled discrete-time agents. , 2014, , .		2
89	Asymptotic Properties of Nonlinear Singularly Perturbed Volterra Equationsâˆ—âˆ—Supported by St. Petersburg State University, grant 6.38.230.2015. IFAC-PapersOnLine, 2015, 48, 604-609.	0.9	2
90	Dichotomic differential inequalities and multi-agent coordination. , 2016, , .		2

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91	Dichotomy and Stability of Disturbed Systems with Periodic Nonlinearities. , 2018, , .		2
92	Long-term Behavior of Mean-field Noisy Bounded Confidence Models with Distributed Radicals. , 2019, , .		2
93	Stability of systems with periodic nonlinearities: a method of periodic Lyapunov functionals. , 2019, , .		2
94	Optimal universal controllers for roll stabilization. Ocean Engineering, 2020, 197, 106911.	4.3	2
95	Deep Integration of INS and DP: from Theory to Experiments. IFAC-PapersOnLine, 2021, 54, 132-138.	0.9	2
96	Collision-avoiding decentralized control for vehicle platoons: a mechanical perspective. IFAC-PapersOnLine, 2020, 53, 15235-15240.	0.9	2
97	Does sample-time emulation preserve exponential stability?. , 2020, , .		2
98	Regular triangulations of non-convex polytopes. Russian Mathematical Surveys, 2002, 57, 817-818.	0.6	1
99	Optimal tracking of stochastic signals with unknown spectral density in discrete-time control systems. Doklady Mathematics, 2008, 78, 631-635.	0.6	1
100	Synthesis of an adaptive regulator in the problem of invariance of an uncertain discrete linear system. Doklady Mathematics, 2009, 80, 781-784.	0.6	1
101	Consensus in networks of integrators with unknown nonlinear couplings and communication delays.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 330-335.	0.4	1
102	Convergence of Symmetric Nonlinear Consensus Protocols with Quadratically Constrained Couplings. *. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 1400-1405.	0.4	1
103	Optimal model matching problem for stochastic signals with an unknown fast decreasing spectral density. Doklady Mathematics, 2011, 83, 126-130.	0.6	1
104	Uniform deployment of second-order agents on a line segment. , 2014, , .		1
105	Entrainment of Goodwin's oscillators by periodic exogenous signals. , 2015, , .		1
106	Speed-gradient entropy maximization in networks. , 2016, , .		1
107	Stability and oscillations of singularly perturbed phase synchronization systems with distributed parameters. , 2016, , .		1
108	A novel homogenous protocol for multi-agent clustering over directed graphs. , 2016, , .		1

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109	Control of Educational Processes Using SPSA. , 2016, , .		1
110	A small-gain-theorem-like approach to nonlinear observability via finite capacity channels * *A. Pogromsky acknowledges his partial support during his stay with the ITMO university by Government of Russian Federation grant (074-U01), Russian Federation President Grant N14.Y31.16.9281-HIII, and the Ministry of Education and Science of Russian Federation (project 14.Z50.31.0031), (Secs. 1,3,4). A. Matveev acknowledges his support by RSF 14-21-00041p and the Saint Petersburg State University (Secs.) Tj ETQq0 0 0 rgBT /Overlock	0.9	1
111	Singular Perturbations of Volterra Equations with Periodic Nonlinearities. Stability and Oscillatory Properties * *The results were obtained at Institute for Problems of Mechanical Engineering of the Russian Academy of Sciences (IPME RAS) and supported by Russian Science Foundation (RSF) grant 16-19-00057. IFAC-PapersOnLine, 2017, 50, 8454-8459.	0.9	1
112	The development of Lyapunov direct method in application to synchronization systems. Journal of Physics: Conference Series, 2021, 1864, 012065.	0.4	1
113	Dynamical Social Networks. , 2020, , 1-11.		1
114	Weighted SPSA-based Consensus Algorithm for Distributed Cooperative Target Tracking. , 2021, , .		1
115	Regular triangulations and Steiner points. St Petersburg Mathematical Journal, 2005, 16, 673-691.	0.4	0
116	Thrust Ability Diagrams of DP Vessels: Computational Aspects. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 144-148.	0.4	0
117	Adaptive regulators in tracking problems for uncertain linear discrete-time systems. Doklady Mathematics, 2011, 84, 582-585.	0.6	0
118	The Yakubovich quadratic criterion, F-stability and multi-agent consensus.â^—â^—The paper was partially supported by RFBR, grants 13-0801014 and 14-08-01015 and St. Petersburg State University, grant 6.38.230.2015. Theorems 8 and 9 in Section 2 are obtained in Institute for Problems of Mechanical Engineering RAS and supported by Russian Scientific Foundation only (RSF), grant 14-29-00142. IFAC-PapersOnLine, 2015, 48, 414-419.	0.9	0
119	Transient processes in synchronization systems governed by singularly perturbed Volterra equations. , 2015, , .		0
120	A simple positive state observer for multidimensional Goodwin's oscillator. , 2019, , .		0
121	Special issue dedicated to Prof. Alexander L. Fradkov. International Journal of Control, 2020, 93, 171-172.	1.9	0
122	Leonovâ€™s method of nonlocal reduction for pointwise stability of phase systems. , 2020, , .		0
123	New criteria for gradientâ€"like behavior of synchronization systems with distributed parameters. , 2020, , .		0
124	On Dissipativity Conditions for Linearized Models of Locally Active Circuit Blocks. , 2020, , .		0
125	Convergence Analysis of Weighted SPSA-based Consensus Algorithm in Distributed Parameter Estimation Problem. IFAC-PapersOnLine, 2021, 54, 126-131.	0.9	0
126	Impulsive Goodwinâ€™s Oscillator Model of Endocrine Regulation: Local Feedback Leads to Multistability. , 2021, , .		0

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127	Average consensus in symmetric nonlinearly coupled delayed networks. , 2013, , .		0
128	New results on cycle–slipping in pendulum–like systems. Cybernetics and Physics, 2019, , 167-175.	0.3	0
129	Leonov's nonlocal reduction technique for nonlinear integro-differential equations. IFAC-PapersOnLine, 2020, 53, 6398-6403.	0.9	0
130	The sunflower equation: novel stability criteria. IFAC-PapersOnLine, 2021, 54, 135-140.	0.9	0