Denis N Sidorov

List of Publications by Year
in descending order

139	1,552	361045	414034
papers	citations	20 h-index	32 g-index

145	145	145	1207
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design and optimal energy management of community microgrids with flexible renewable energy sources. Renewable Energy, 2022, 183, 903-921.	4.3	73
2	Bidirectional Gated Recurrent Unit-Based Lower Upper Bound Estimation Method for Wind Power Interval Prediction. IEEE Transactions on Artificial Intelligence, 2022, 3, 461-469.	3.4	8
3	Dynamical strategy on homotopy perturbation method for solving second kind integral equations using the CESTAC method. Journal of Computational and Applied Mathematics, 2022, 411, 114226.	1.1	12
4	A Stochastic Model for Determining Static Stability Margins in Electric Power Systems. Computation, 2022, 10, 67.	1.0	1
5	Machine Learning for Energy Systems Optimization. Energies, 2022, 15, 4116.	1.6	6
6	Branching Solutions of the Cauchy Problem for Nonlinear Loaded Differential Equations with Bifurcation Parameters. Mathematics, 2022, 10, 2134.	1.1	0
7	Application of the stochastic arithmetic to validate the results of nonlinear fractional model of HIV infection for CD8+T-cells. , 2022, , 259-285.		0
8	Resilient future energy systems: smart grids, vehicle-to-grid, and microgrids. , 2021, , 571-597.		4
9	Identification of Mode Shapes Based on Ambient Signals and the IA-VMD Method. Applied Sciences (Switzerland), 2021, 11, 530.	1.3	0
10	Volterra Model of Energy Storage with Nonlinear Efficiency in Integrated Power Systems. Advances in Intelligent Systems and Computing, 2021, , 808-815.	0.5	0
11	Hybrid renewable energy systems, load and generation forecasting, new grids structure, and smart technologies. , 2021, , 475-484.		2
12	The Numerical Validation of the Adomian Decomposition Method for Solving Volterra Integral Equation with Discontinuous Kernels Using the CESTAC Method. Mathematics, 2021, 9, 260.	1.1	37
13	Integral Equations: Theories, Approximations, and Applications. Symmetry, 2021, 13, 1402.	1.1	3
14	Towards the Flexible Distribution Networks Design Using the Reliability Performance Metric. Energies, 2021, 14, 6193.	1.6	19
15	Valid Implementation of the Fractional Order Model of Energy Supply-Demand System. Communications in Computer and Information Science, 2021, , 493-503.	0.4	1
16	A Valid Dynamical Control on the Reverse Osmosis System Using the CESTAC Method. Mathematics, 2021, 9, 48.	1.1	14
17	On Nonlinear Forced Impulsive Differential Equations under Canonical and Non-Canonical Conditions. Symmetry, 2021, 13, 2066.	1.1	5
18	Generalisation of the Frobenius Formula in the Theory of Block Operators on Normed Spaces. Mathematics, 2021, 9, 3066.	1.1	0

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19	Dynamical control on the Adomian decomposition method for solving shallow water wave equation. Vestnik Irkutskogo Gosudarstvennogo Tehniceskogo Universiteta, 2021, 25, 623-632.	0.1	2
20	A Study on the Effect of Energy Storage Systems and Distributed Generators on Reliability. , 2021, , .		1
21	Oscillatory Behavior of Third-Order Quasi-Linear Neutral Differential Equations. Axioms, 2021, 10, 346.	0.9	3
22	A Dynamic Analysis of Energy Storage With Renewable and Diesel Generation Using Volterra Equations. IEEE Transactions on Industrial Informatics, 2020, 16, 3451-3459.	7.2	61
23	Machine Learning for Energy Systems. Energies, 2020, 13, 4708.	1.6	8
24	Two-Stage Active and Reactive Power Coordinated Optimal Dispatch for Active Distribution Network Considering Load Flexibility. Energies, 2020, 13, 5922.	1.6	11
25	Nonlinear Systems of Volterra Equations with Piecewise Smooth Kernels: Numerical Solution and Application for Power Systems Operation. Mathematics, 2020, 8, 1257.	1.1	13
26	Error Estimation of the Homotopy Perturbation Method to Solve Second Kind Volterra Integral Equations with Piecewise Smooth Kernels: Application of the CADNA Library. Symmetry, 2020, 12, 1730.	1.1	32
27	Optimal Operation Control of PV-Biomass Gasifier-Diesel-Hybrid Systems Using Reinforcement Learning Techniques. Energies, 2020, 13, 2632.	1.6	16
28	Solvability and Bifurcation of Solutions of Nonlinear Equations with Fredholm Operator. Symmetry, 2020, 12, 912.	1.1	3
29	Blockchain Technology for Information Security of the Energy Internet: Fundamentals, Features, Strategy and Application. Energies, 2020, 13, 881.	1.6	45
30	Toward Zero-Emission Hybrid AC/DC Power Systems with Renewable Energy Sources and Storages: A Case Study from Lake Baikal Region. Energies, 2020, 13, 1226.	1.6	31
31	Operational Risk Assessment of Electric-Gas Integrated Energy Systems Considering N-1 Accidents. Energies, 2020, 13, 1208.	1.6	10
32	Day-ahead optimization schedule for gas-electric integrated energy system based on second-order cone programming. CSEE Journal of Power and Energy Systems, 2020, , .	1.7	35
33	Recurrent Neural Networks Application to Forecasting with Two Cases: Load and Pollution. Advances in Intelligent Systems and Computing, 2020, , 369-378.	0.5	4
34	Caputo-Fabrizio Fractional Derivative to Solve the Fractional Model of Energy Supply-Demand System. Mathematical Modelling of Engineering Problems, 2020, 7, 359-367.	0.3	31
35	On the Occasion of the 80th Birthday of Professor N. A. Sidorov. Bulletin of Irkutsk State University, Series Mathematics, 2020, 32, 134-143.	0.1	0
36	Review of Monograph â€Toward General Theory of Differential â€“ Operator and Kinetic Modelsâ€: Bulletin of Irkutsk State University, Series Mathematics, 2020, 32, 118-123.	0.1	0

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37	Centralized emergency control for multi-terminal VSC-based shipboard power systems. International Journal of Electrical Power and Energy Systems, 2019, 104, 205-214.	3.3	14
38	Nonlinear systemsâ€™ equilibrium points: branching, blow-up and stability. Journal of Physics: Conference Series, 2019, 1268, 012065.	0.3	3
39	Air Pollution Forecasting Using a Deep Learning Model Based on 1D Convnets and Bidirectional GRU. IEEE Access, 2019, 7, 76690-76698.	2.6	182
40	First results of the tracking system calibration of the TAIGA-IACT telescope. Journal of Physics: Conference Series, 2019, 1181, 012045.	0.3	9
41	Basins of Attraction and Stability of Nonlinear Systemsâ€™ Equilibrium Points. Differential Equations and Dynamical Systems, 2019, , 1.	0.5	3
42	Energy balancing using charge/discharge storages control and load forecasts in a renewable-energy-based grids. , 2019, , .		13
43	Ensemble methods of classification for power systems security assessment. Applied Computing and Informatics, 2019, 15, 45-53.	3.7	30
44	Classic Solutions of Boundary Value Problems for Partial Differential Equations with Operator of Finite Index in the Main Part of Equation. Bulletin of Irkutsk State University, Series Mathematics, 2019, 27, 55-70.	0.1	2
45	Control of Accuracy on Taylor-Collocation Method for Load Leveling Problem. Bulletin of Irkutsk State University, Series Mathematics, 2019, 30, 59-72.	0.1	17
46	IPMSM Speed and Current Controller Design for Electric Vehicles Based on Explicit MPC. Journal of Advanced Computational Intelligence and Intelligent Informatics, 2019, 23, 1019-1026.	0.5	2
47	Machine learning algorithms application to road defects classification. Intelligent Decision Technologies, 2018, 12, 59-66.	0.6	15
48	On-Line Power Systems Security Assessment Using Data Stream Random Forest Algorithm Modification. Studies in Computational Intelligence, 2018, , 183-200.	0.7	5
49	Volterra Models in Load Leveling Problem. E3S Web of Conferences, 2018, 69, 01015.	0.2	6
50	The Charge and Discharge Integrated Management Mode of EVs with Financial Incentive Mechanism. , 2018, , .		2
51	A Robust Active Disturbance Rejection Controller Design for LFC in Two-area Power System. , 2018, , .		2
52	Power Losses Minimization In Radial Distribution Networks By Capacitor Allocation Using Hybrid Evolutionary Computation Technique. , 2018, , .		1
53	Voltage/VAR Control and Optimization: AI approach. IFAC-PapersOnLine, 2018, 51, 103-108.	0.5	5
54	Towards Reliable Ionospheric Total Electron Content Nowcasting. , 2018, , .		1

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55	Optimal Power Flow Calculation Using BFGS-Based Optimisation Scheme. , 2018, , .		2
56	Economic Dispatch in Smart Grid Based on Fully Distributed Consensus Algorithm with Time Delay. , 2018, , .		6
57	Random Forest, Support Vector Regression and Gradient Boosting Methods for Ionosphere Total Electron Content Nowcasting Problem at Mid-Latitudes. , 2018, , .		3
58	Active disturbance rejection control based on EID compensation for LFC with communication delays. IFAC Journal of Systems and Control, 2018, 6, 25-32.	1.1	13
59	A Suite of Intelligent Tools for Early Detection and Prevention of Blackouts in Power Interconnections. Automation and Remote Control, 2018, 79, 1741-1755.	0.4	8
60	Parameter Estimation of Electromechanical Oscillation Based on a Constrained EKF with C&I-PSO. Energies, 2018, 11, 2059.	1.6	3
61	Numerical method for systems of nonlinear Volterra integral equations of the first kind with discontinuous kernels. Zhurnal Srednevolzhskogo Matematicheskogo Obshchestva, 2018, 20, 55-63.	0.0	2
62	Areas of Attraction of Equilibrium Points of Nonlinear Systems: Stability, Branching and Blow-up of Solutions. Bulletin of Irkutsk State University, Series Mathematics, 2018, 23, 46-63.	0.1	1
63	Volterra Equation Based Models for Energy Storage Usage Based on Load Forecast in EPS with Renewable Generation. Bulletin of Irkutsk State University, Series Mathematics, 2018, 26, 76-90.	0.1	4
64	Selecting the key control parameters for the ionospheric total electron content nowcasting. Sovremennye Problemy Distantsionnogo Zondirovaniya Zemli Iz Kosmosa, 2018, 15, 263-272.	0.1	0
65	A Controllably Inductive Filtering Method With Transformer-Integrated Linear Reactor for Power Quality Improvement of Shipboard Power System. IEEE Transactions on Power Delivery, 2017, 32, 1817-1827.	2.9	31
66	Discrete Spectrum Reconstruction Using Integral Approximation Algorithm. Applied Spectroscopy, 2017, 71, 1640-1651.	1.2	10
67	A combined forecasting approach with model self-adjustment for renewable generations and energy loads in smart community. Energy, 2017, 129, 216-227.	4.5	40
68	Development of automatic intelligent system for on-line voltage security control of power systems. , 2017, , .		5
69	A modular multilevel converter type solid state transformer with internal model control method. International Journal of Electrical Power and Energy Systems, 2017, 85, 153-163.	3.3	36
70	Numeric solution of Volterra integral equations of the first kind with discontinuous kernels. Journal of Computational and Applied Mathematics, 2017, 313, 119-128.	1.1	30
71	Machine learning in electric power systems adequacy assessment using Monte-Carlo method. , 2017, , .		3
72	Solution of Irregular Systems of Partial Differential Equations Using Skeleton Decomposition of Linear Operators. Bulletin of the South Ural State University, Series: Mathematical Modelling, Programming and Computer Software, 2017, 10, 63-73.	0.1	3

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73	Russian-Chinese Workshop "Mathematical Modeling of Renewable and Isolated Hybrid Power Systems". Bulletin of Irkutsk State University, Series Mathematics, 2017, , 122-126.	0.1	0
74	The Identification of External Force Dynamics in The Modeling of Vibration. Bulletin of Irkutsk State University, Series Mathematics, 2017, 19, 105-112.	0.1	0
75	Skeleton Decomposition of Linear Operators in the Theory of Nonregular Systems of Partial Differential Equations. Bulletin of Irkutsk State University, Series Mathematics, 2017, 20, 75-95.	0.1	0
76	Modeling and operating characteristic analysis of MMC-SST based shipboard power system. , 2016, , .		4
77	Decentralized multi-agent algorithm for voltage control. , 2016, , .		1
78	Short-term wind power forecasting based on T-S fuzzy model. , 2016, , .		0
79	Machine Learning Techniques for Power System Security Assessment**This work was supported by the Russian Scientific Foundation under Grant No. 14-19-00054 and the 2015 Endeavour Scholarship and Fellowship program.. IFAC-PapersOnLine, 2016, 49, 445-450.	0.5	30
80	Development of computional intelligence-based algorithms of preventing voltage collapse in power systems with a complex multi-loop structure. , 2016, , .		4
81	Simplified variable frequency induction-motor drive model for power system stability studies and control. IFAC-PapersOnLine, 2016, 49, 451-454.	0.5	8
82	A combined work optimization technology under resource constraints with an application to road repair. Automation and Remote Control, 2016, 77, 1883-1893.	0.4	3
83	Generalized quadrature for solving singular integral equations of Abel type in application to infrared tomography. Applied Numerical Mathematics, 2016, 106, 69-78.	1.2	23
84	Solvability and Numerical Solutions of Systems of Nonlinear Volterra Integral Equations of the First Kind with Piecewise Continuous Kernels. Bulletin of the South Ural State University, Series: Mathematical Modelling, Programming and Computer Software, 2016, 9, 130-136.	0.1	4
85	Modification of Random Forest Based Approach for Streaming Data with Concept Drift. Bulletin of the South Ural State University, Series: Mathematical Modelling, Programming and Computer Software, 2016, 9, 86-95.	0.1	0
86	Development of software for modelling decentralized intelligent systems for security monitoring and control in power systems. , 2015, , .		9
87	A hybrid artificial neural network for voltage security evaluation in a power system. , 2015, , .		11
88	On Perturbation Method for the First Kind Equations: Regularization and Application. Bulletin of the South Ural State University, Series: Mathematical Modelling, Programming and Computer Software, 2015, 8, 69-80.	0.1	0
89	A hybrid wind speed forecasting strategy based on Hilbert-Huang transform and machine learning algorithms. , 2014, , .		1
90	On the solvability of a class of Volterra operator equations of the first kind with piecewise continuous kernels. Mathematical Notes, 2014, 96, 811-826.	0.1	11

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91	Volterra Models of Evolving Dynamical Systems. World Scientific Series on Nonlinear Science, Series A, 2014, , 9-12.	0.0	0
92	Suppression of MoirÃ© Patterns for Video Archive Restoration. World Scientific Series on Nonlinear Science, Series A, 2014, , 179-197.	0.0	0
93	Convex Majorants Method in the Theory of Nonlinear Volterra Equations. World Scientific Series on Nonlinear Science, Series A, 2014, , 107-126.	0.0	0
94	Existence and blow-up of Kantorovich principal continuous solutions of nonlinear integral equations. Differential Equations, 2014, 50, 1217-1224.	0.1	25
95	On one integral Volterra model of developing dynamical systems. Automation and Remote Control, 2014, 75, 413-421.	0.4	10
96	Forecasting nonstationary time series based on Hilbert-Huang transform and machine learning. Automation and Remote Control, 2014, 75, 922-934.	0.4	17
97	Integral Models Applications in Electric Power Engineering. World Scientific Series on Nonlinear Science, Series A, 2014, , 199-225.	0.0	1
98	Numerical Solution of Volterra Integral Equations of the First Kind with Piecewise Continuous Kernel. Bulletin of the South Ural State University, Series: Mathematical Modelling, Programming and Computer Software, 2014, 7, 107-115.	0.1	1
99	Optimal Training of Artificial Neural Networks to Forecast Power System State Variables. International Journal of Energy Optimization and Engineering, 2014, 3, 65-82.	0.4	12
100	Nonlinear Hammerstein Integral Equations. World Scientific Series on Nonlinear Science, Series A, 2014, , 69-82.	0.0	1
101	Integral Models Applications. World Scientific Series on Nonlinear Science, Series A, 2014, , 159-161.	0.0	0
102	Volterra Matrix Equation of the First Kind with Piecewise Continuous Kernels. World Scientific Series on Nonlinear Science, Series A, 2014, , 23-36.	0.0	0
103	Volterra Operator Equations of the First Kind with Piecewise Continuous Kernels. World Scientific Series on Nonlinear Science, Series A, 2014, , 37-53.	0.0	0
104	Nonlinear Volterra Operator Equations with Non-invertible Operator. World Scientific Series on Nonlinear Science, Series A, 2014, , 83-94.	0.0	0
105	Nonlinear Models, Singularities and Control. World Scientific Series on Nonlinear Science, Series A, 2014, , 65-67.	0.0	0
106	Nonlinear Differential Equations Near Branching Points. World Scientific Series on Nonlinear Science, Series A, 2014, , 95-106.	0.0	0
107	Volterra Equations of the First Kind with Piecewise Continuous Kernels. World Scientific Series on Nonlinear Science, Series A, 2014, , 13-22.	0.0	0
108	On Impulse Control of Nonlinear Dynamical Systems Based on the Volterra Series. World Scientific Series on Nonlinear Science, Series A, 2014, , 133-157.	0.0	0

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109	Generalized Solutions to Nonlinear Volterra Equations of the First Kind. World Scientific Series on Nonlinear Science, Series A, 2014, , 127-132.	0.0	0
110	Generalized Solution to the Volterra Equations with Piecewise Continuous Kernels and Sources. World Scientific Series on Nonlinear Science, Series A, 2014, , 55-63.	0.0	2
111	The Volterra Models Applications. World Scientific Series on Nonlinear Science, Series A, 2014, , 163-178.	0.0	0
112	On parametric families of solutions of Volterra integral equations of the first kind with piecewise smooth kernel. Differential Equations, 2013, 49, 210-216.	0.1	20
113	Hybrid genetic algorithms for forecasting power systems state variables. , 2013, , .		1
114	Development of an intelligent system for preventing large-scale emergencies in power systems. , 2013, , .		29
115	Solvability of systems of volterra integral equations of the first kind with piecewise continuous kernels. Russian Mathematics, 2013, 57, 54-63.	0.1	19
116	Application of Meta-Heuristic Optimization Algorithms in Electric Power Systems. , 2013, , 564-615.		3
117	Convex majorants method in the theory of nonlinear Volterra equations. Banach Journal of Mathematical Analysis, 2012, 6, 1-10.	0.4	24
118	Successive approximations to the solutions to nonlinear equations with a vector parameter in a nonregular case. Journal of Applied and Industrial Mathematics, 2012, 6, 387-392.	0.1	0
119	The hybrid model based on Hilbert-Huang Transform and neural networks for forecasting of short-term operation conditions of power system. , 2011, , .		10
120	Application of two stages adaptive neural network approach for short-term forecast of electric power systems. , 2011, , .		4
121	On impulsive control of nonlinear dynamical systems based on the Volterra series. , 2011, , .		4
122	Generalized solutions in the problem of dynamical systems modeling by Volterra polynomials. Automation and Remote Control, 2011, 72, 1258-1263.	0.4	4
123	On the neural network approach for forecasting of nonstationary time series on the basis of the Hilbert-Huang transform. Automation and Remote Control, 2011, 72, 1405-1414.	0.4	25
124	Small solutions of nonlinear differential equations near branching points. Russian Mathematics, 2011, 55, 43-50.	0.1	4
125	Hybrid Model for Short-Term Forecasting in ElectricPower System. International Journal of Machine Learning and Computing, 2011, , 138-147.	0.8	6
126	On-line detection of inter-area oscillations using forgetting approach for power systems monitoring. , 2010, , .		4

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127	Solving the hammerstein integral equation in the irregular case by successive approximations. Siberian Mathematical Journal, 2010, 51, 325-329.	0.2	11
128	Solution of Volterra operator-integral equations in the nonregular case by the successive approximation method. Differential Equations, 2010, 46, 882-891.	0.1	5
129	Non-stationary autoregressive model for on-line detection of inter-area oscillations in power systems. , 2010, , .		6
130	Operating conditions forecasting for monitoring and control of electric power systems. , 2010, , .		1
131	Electricity prices neural networks forecast using the Hilbert-Huang transform. , 2010, , .		3
132	Generalized solutions to integral equations in the problem of identification of nonlinear dynamic models. Automation and Remote Control, 2009, 70, 598-604.	0.4	3
133	Automatic defects classification with p-median clustering technique. , 2008, , .		4
134	Generalized solutions of integralâ€ffunctional equations: construction and applications in power industry. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1040805-1040806.	0.2	0
135	<title>Applying wavelets and evolutionary algorithms to automatic image enhancement</title>. , 2006, , .		2
136	Existence and construction of generalized solutions of nonlinear volterra integral equations of the first kind. Differential Equations, 2006, 42, 1312-1316.	0.1	5
137	<title>Robust retrieval from compressed medical image archives</title>. , 2005, 5748, 419.		1
138	Digital Restoration Systems: Coping with Reality. Smpte Motion Imaging Journal, 2003, 112, 225-231.	0.2	8
139	Suppression of moire patterns via spectral analysis. , 2002, , .		16