Yunong Zhang

List of Publications by Year
in descending order

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514	12,116	22099	39575
papers	citations	59	94
		h-index	g-index

530	530	530	2077
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design and Analysis of a General Recurrent Neural Network Model for Time-Varying Matrix Inversion. IEEE Transactions on Neural Networks, 2005, 16, 1477-1490.	4.8	486
2	A recurrent neural network for solving Sylvester equation with time-varying coefficients. IEEE Transactions on Neural Networks, 2002, 13, 1053-1063.	4.8	454
3	A Unified Quadratic-Programming-Based Dynamical System Approach to Joint Torque Optimization of Physically Constrained Redundant Manipulators. IEEE Transactions on Systems, Man, and Cybernetics, 2004, 34, 2126-2132.	5.5	259
4	Kinematic Control of Redundant Manipulators Using Neural Networks. IEEE Transactions on Neural Networks and Learning Systems, 2017, 28, 2243-2254.	7.2	238
5	A dual neural network for redundancy resolution of kinematically redundant manipulators subject to joint limits and joint velocity limits. IEEE Transactions on Neural Networks, 2003, 14, 658-667.	4.8	225
6	Integration-Enhanced Zhang Neural Network for Real-Time-Varying Matrix Inversion in the Presence of Various Kinds of Noises. IEEE Transactions on Neural Networks and Learning Systems, 2016, 27, 2615-2627.	7.2	198
7	Modified ZNN for Time-Varying Quadratic Programming With Inherent Tolerance to Noises and Its Application to Kinematic Redundancy Resolution of Robot Manipulators. IEEE Transactions on Industrial Electronics, 2016, 63, 6978-6988.	5.2	194
8	Performance Analysis of Gradient Neural Network Exploited for Online Time-Varying Matrix Inversion. IEEE Transactions on Automatic Control, 2009, 54, 1940-1945.	3.6	185
9	From Zhang Neural Network to Newton Iteration for Matrix Inversion. IEEE Transactions on Circuits and Systems I: Regular Papers, 2009, 56, 1405-1415.	3.5	171
10	Comparison on Zhang neural dynamics and gradient-based neural dynamics for online solution of nonlinear time-varying equation. Neural Computing and Applications, 2011, 20, 1-7.	3.2	168
11	Noise-Tolerant ZNN Models for Solving Time-Varying Zero-Finding Problems: A Control-Theoretic Approach. IEEE Transactions on Automatic Control, 2017, 62, 992-997.	3.6	166
12	Zhang neural network for online solution of time-varying convex quadratic program subject to time-varying linear-equality constraints. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 1639-1643.	0.9	164
13	Obstacle Avoidance for Kinematically Redundant Manipulators Using a Dual Neural Network. IEEE Transactions on Systems, Man, and Cybernetics, 2004, 34, 752-759.	5.5	160
14	Control of pendulum tracking (including swinging up) of IPC system using zeroing-gradient method. Nonlinear Dynamics, 2017, 89, 1-25.	2.7	148
15	Tracking Control of Robot Manipulators with Unknown Models: A Jacobian-Matrix-Adaption Method. IEEE Transactions on Industrial Informatics, 2018, 14, 3044-3053.	7.2	148
16	A dual neural network for bi-criteria kinematic control of redundant manipulators. IEEE Transactions on Automation Science and Engineering, 2002, 18, 923-931.	2.4	139
17	A dual neural network for convex quadratic programming subject to linear equality and inequality constraints. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 298, 271-278.	0.9	138
18	Acceleration-Level Inequality-Based MAN Scheme for Obstacle Avoidance of Redundant Robot Manipulators. IEEE Transactions on Industrial Electronics, 2014, 61, 6903-6914.	5.2	137

#	Article	IF	Citations
19	Discrete-Time Zhang Neural Network for Online Time-Varying Nonlinear Optimization With Application to Manipulator Motion Generation. IEEE Transactions on Neural Networks and Learning Systems, 2015, 26, 1525-1531.	7.2	125
20	Zhang neural network solving for time-varying full-rank matrix Mooreâ€“Penrose inverse. Computing (Vienna/New York), 2011, 92, 97-121.	3.2	122
21	Different Complex ZFs Leading to Different Complex ZNN Models for Time-Varying Complex Generalized Inverse Matrices. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 1621-1631.	7.2	121
22	Neural-Dynamic-Method-Based Dual-Arm CMG Scheme With Time-Varying Constraints Applied to Humanoid Robots. IEEE Transactions on Neural Networks and Learning Systems, 2015, 26, 3251-3262.	7.2	121
23	Robust Zeroing Neural-Dynamics and Its Time-Varying Disturbances Suppression Model Applied to Mobile Robot Manipulators. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 4385-4397.	7.2	118
24	G2-Type SRMPC Scheme for Synchronous Manipulation of Two Redundant Robot Arms. IEEE Transactions on Cybernetics, 2015, 45, 153-164.	6.2	115
25	Taylor $O(h^{3})$ Discretization of ZNN Models for Dynamic Equality-Constrained Quadratic Programming With Application to Manipulators. IEEE Transactions on Neural Networks and Learning Systems, 2016, 27, 225-237.	7.2	112
26	Zhang Neural Network Versus Gradient Neural Network for Solving Time-Varying Linear Inequalities. IEEE Transactions on Neural Networks, 2011, 22, 1676-1684.	4.8	111
27	A New Inequality-Based Obstacle-Avoidance MVN Scheme and Its Application to Redundant Robot Manipulators. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2012, 42, 1326-1340.	3.3	109
28	Taylor-type 1-step-ahead numerical differentiation rule for first-order derivative approximation and ZNN discretization. Journal of Computational and Applied Mathematics, 2015, 273, 29-40.	1.1	104
29	Continuous and discrete Zhang dynamics for real-time varying nonlinear optimization. Numerical Algorithms, 2016, 73, 115-140.	1.1	104
30	Discrete-time Zhang neural network of O(Ï„3) pattern for time-varying matrix pseudoinversion with application to manipulator motion generation. Neurocomputing, 2014, 142, 165-173.	3.5	102
31	Global exponential stability of recurrent neural networks for synthesizing linear feedback control systems via pole assignment. IEEE Transactions on Neural Networks, 2002, 13, 633-644.	4.8	101
32	Repetitive Motion Planning and Control of Redundant Robot Manipulators. , 2013, , .		101
33	Design and experimentation of accelerationâ€level driftâ€free scheme aided by two recurrent neural networks. IET Control Theory and Applications, 2013, 7, 25-42.	1.2	100
34	Li-function activated ZNN with finite-time convergence applied to redundant-manipulator kinematic control via time-varying Jacobian matrix pseudoinversion. Applied Soft Computing Journal, 2014, 24, 158-168.	4.1	97
35	A dual neural network for constrained joint torque optimization of kinematically redundant manipulators. IEEE Transactions on Systems, Man, and Cybernetics, 2002, 32, 654-662.	5.5	93
36	Different-Level Redundancy-Resolution and Its Equivalent Relationship Analysis for Robot Manipulators Using Gradient-Descent and Zhang 's Neural-Dynamic Methods. IEEE Transactions on Industrial Electronics, 2012, 59, 3146-3155.	5.2	93

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37	A New Performance Index for the Repetitive Motion of Mobile Manipulators. IEEE Transactions on Cybernetics, 2014, 44, 280-292.	6.2	93
38	Recurrent neural networks for nonlinear output regulation. Automatica, 2001, 37, 1161-1173.	3.0	88
39	Zhang neural network, Getzâ€“Marsden dynamic system, and discrete-time algorithms for time-varying matrix inversion with application to robots' kinematic control. Neurocomputing, 2012, 97, 22-32.	3.5	84
40	Acceleration-Level Cyclic-Motion Generation of Constrained Redundant Robots Tracking Different Paths. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 1257-1269.	5.5	82
41	Variable Joint-Velocity Limits of Redundant Robot Manipulators Handled by Quadratic Programming. IEEE/ASME Transactions on Mechatronics, 2013, 18, 674-686.	3.7	80
42	Division by zero, pseudo-division by zero, Zhang dynamics method and Zhang-gradient method about control singularity conquering. International Journal of Systems Science, 2017, 48, 1-12.	3.7	79
43	Repetitive motion planning of PA10 robot arm subject to joint physical limits and using LVI-based primalâ€“dual neural network. Mechatronics, 2008, 18, 475-485.	2.0	74
44	From different ZFs to different ZNN models accelerated via Li activation functions to finite-time convergence for time-varying matrix pseudoinversion. Neurocomputing, 2014, 133, 512-522.	3.5	73
45	Zhang Neural Network for Online Solution of Time-Varying Linear Matrix Inequality Aided With an Equality Conversion. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 370-382.	7.2	73
46	O(N2)-Operation Approximation of Covariance Matrix Inverse in Gaussian Process Regression Based on Quasi-Newton BFGS Method. Communications in Statistics Part B: Simulation and Computation, 2007, 36, 367-380.	0.6	72
47	A set of nonlinear equations and inequalities arising in robotics and its online solution via a primal neural network. Neurocomputing, 2006, 70, 513-524.	3.5	71
48	Acceleration-Level Repetitive Motion Planning and Its Experimental Verification on a Six-Link Planar Robot Manipulator. IEEE Transactions on Control Systems Technology, 2013, 21, 906-914.	3.2	71
49	Repetitive motion of redundant robots planned by three kinds of recurrent neural networks and illustrated with a four-link planar manipulatorâ€™s straight-line example. Robotics and Autonomous Systems, 2009, 57, 645-651.	3.0	69
50	Global exponential convergence and stability of gradient-based neural network for online matrix inversion. Applied Mathematics and Computation, 2009, 215, 1301-1306.	1.4	69
51	Two New Types of Zhang Neural Networks Solving Systems of Time-Varying Nonlinear Inequalities. IEEE Transactions on Circuits and Systems I: Regular Papers, 2012, 59, 2363-2373.	3.5	69
52	A Hybrid Multi-Objective Scheme Applied to Redundant Robot Manipulators. IEEE Transactions on Automation Science and Engineering, 2017, 14, 1337-1350.	3.4	69
53	QP-based refined manipulability-maximizing scheme for coordinated motion planning and control of physically constrained wheeled mobile redundant manipulators. Nonlinear Dynamics, 2016, 85, 245-261.	2.7	67
54	Link Between and Comparison and Combination of Zhang Neural Network and Quasi-Newton BFGS Method for Time-Varying Quadratic Minimization. IEEE Transactions on Cybernetics, 2013, 43, 490-503.	6.2	66

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55	Common Nature of Learning Between Back-Propagation and Hopfield-Type Neural Networks for Generalized Matrix Inversion With Simplified Models. IEEE Transactions on Neural Networks and Learning Systems, 2013, 24, 579-592.	7.2	66
56	Zhang Functions and Various Models. , 2015, , .		66
57	Time-varying square roots finding via Zhang dynamics versus gradient dynamics and the former's link and new explanation to Newtonâ€“Raphson iteration. Information Processing Letters, 2010, 110, 1103-1109.	0.4	63
58	Complex-valued Zhang neural network for online complex-valued time-varying matrix inversion. Applied Mathematics and Computation, 2011, 217, 10066-10073.	1.4	62
59	Solving time-varying inverse kinematics problem of wheeled mobile manipulators using Zhang neural network with exponential convergence. Nonlinear Dynamics, 2014, 76, 1543-1559.	2.7	62
60	New Discretization-Formula-Based Zeroing Dynamics for Real-Time Tracking Control of Serial and Parallel Manipulators. IEEE Transactions on Industrial Informatics, 2018, 14, 3416-3425.	7.2	61
61	Enhanced discrete-time Zhang neural network for time-variant matrix inversion in the presence of bias noises. Neurocomputing, 2016, 207, 220-230.	3.5	60
62	Cross-validation based weights and structure determination of Chebyshev-polynomial neural networks for pattern classification. Pattern Recognition, 2014, 47, 3414-3428.	5.1	58
63	Zeroing neural-dynamics approach and its robust and rapid solution for parallel robot manipulators against superposition of multiple disturbances. Neurocomputing, 2018, 275, 845-858.	3.5	56
64	Performance analysis of gradient neural network exploited for online time-varying quadratic minimization and equality-constrained quadratic programming. Neurocomputing, 2011, 74, 1710-1719.	3.5	55
65	Zhang neural network versus gradient-based neural network for time-varying linear matrix equation solving. Neurocomputing, 2011, 74, 3708-3712.	3.5	55
66	From Different Zhang Functions to Various ZNN Models Accelerated to Finite-Time Convergence for Time-Varying Linear Matrix Equation. Neural Processing Letters, 2014, 39, 309-326.	2.0	55
67	Neural network-based discrete-time Z-type model of high accuracy in noisy environments for solving dynamic system of linear equations. Neural Computing and Applications, 2018, 29, 1217-1232.	3.2	53
68	New Discrete-Time ZNN Models for Least-Squares Solution of Dynamic Linear Equation System With Time-Varying Rank-Deficient Coefficient. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 5767-5776.	7.2	52
69	General four-step discrete-time zeroing and derivative dynamics applied to time-varying nonlinear optimization. Journal of Computational and Applied Mathematics, 2019, 347, 314-329.	1.1	52
70	Time-series Gaussian Process Regression Based on Toeplitz Computation of O(N>sup<2>/sup<) Operations and O(N)-level Storage. , 0, , .		51
71	Singularityâ€conquering tracking control of a class of chaotic systems using Zhangâ€gradient dynamics. IET Control Theory and Applications, 2015, 9, 871-881.	1.2	49
72	Z-type neural-dynamics for time-varying nonlinear optimization under a linear equality constraint with robot application. Journal of Computational and Applied Mathematics, 2018, 327, 155-166.	1.1	49

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73	Singularity-conquering ZG controllers of z2g1 type for tracking control of the IPC system. International Journal of Control, 2014, 87, 1729-1746.	1.2	47
74	Discrete-time ZD, GD and NI for solving nonlinear time-varying equations. Numerical Algorithms, 2013, 64, 721-740.	1.1	46
75	ZNN for solving online time-varying linear matrixâ€“vector inequality via equality conversion. Applied Mathematics and Computation, 2015, 259, 327-338.	1.4	46
76	MATLAB Simulink modeling and simulation of LVI-based primalâ€“dual neural network for solving linear and quadratic programs. Neurocomputing, 2009, 72, 1679-1687.	3.5	45
77	Simulation and verification of Zhang neural network for online time-varying matrix inversion. Simulation Modelling Practice and Theory, 2009, 17, 1603-1617.	2.2	45
78	Improved Zhang neural network model and its solution of time-varying generalized linear matrix equations. Expert Systems With Applications, 2010, 37, 7213-7218.	4.4	45
79	Novel Recurrent Neural Network for Time-Varying Problems Solving [Research Frontier]. IEEE Computational Intelligence Magazine, 2012, 7, 61-65.	3.4	45
80	From Davidenko Method to Zhang Dynamics for Nonlinear Equation Systems Solving. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2017, 47, 2817-2830.	5.9	45
81	New Discrete-Time Models of Zeroing Neural Network Solving Systems of Time-Variant Linear and Nonlinear Inequalities. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 565-576.	5.9	45
82	Robustness analysis of the Zhang neural network for online time-varying quadratic optimization. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 245202.	0.7	43
83	Infinitely many Zhang functions resulting in various ZNN models for time-varying matrix inversion with link to Drazin inverse. Information Processing Letters, 2015, 115, 703-706.	0.4	43
84	Tracking control of modified Lorenz nonlinear system using ZG neural dynamics with additive input or mixed inputs. Neurocomputing, 2016, 196, 82-94.	3.5	43
85	Different Zhang functions resulting in different ZNN models demonstrated via time-varying linear matrixâ€“vector inequalities solving. Neurocomputing, 2013, 121, 140-149.	3.5	42
86	Stepsize Range and Optimal Value for Taylorâ€“Zhang Discretization Formula Applied to Zeroing Neurodynamics Illustrated via Future Equality-Constrained Quadratic Programming. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 959-966.	7.2	42
87	Different Zhang functions leading to different Zhang-dynamics models illustrated via time-varying reciprocal solving. Applied Mathematical Modelling, 2012, 36, 4502-4511.	2.2	41
88	Minimum jerk norm scheme applied to obstacle avoidance of redundant robot arm with jerk bounded and feedback control. IET Control Theory and Applications, 2016, 10, 1896-1903.	1.2	40
89	Dynamic design, numerical solution and effective verification of acceleration-level obstacle-avoidance scheme for robot manipulators. International Journal of Systems Science, 2016, 47, 932-945.	3.7	40
90	Different-Level Simultaneous Minimization of Joint-Velocity and Joint-Torque for Redundant Robot Manipulators. Journal of Intelligent and Robotic Systems: Theory and Applications, 2013, 72, 301-323.	2.0	39

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91	Two New Discrete-Time Neurodynamic Algorithms Applied to Online Future Matrix Inversion With Nonsingular or Sometimes-Singular Coefficient. IEEE Transactions on Cybernetics, 2019, 49, 2032-2045.	6.2	39
92	Exploiting Hessian matrix and trust-region algorithm in hyperparameters estimation of Gaussian process. Applied Mathematics and Computation, 2005, 171, 1264-1281.	1.4	37
93	Inverse-free computation for infinity-norm torque minimization of robot manipulators. Mechatronics, 2006, 16, 177-184.	2.0	37
94	Support vector machine optimal control for mobile wheeled inverted pendulums with unmodelled dynamics. Neurocomputing, 2010, 73, 2773-2782.	3.5	37
95	Z-type control of populations for Lotkaâ€“Volterra model with exponential convergence. Mathematical Biosciences, 2016, 272, 15-23.	0.9	37
96	Proposing and Validation of a New Four-Point Finite-Difference Formula With Manipulator Application. IEEE Transactions on Industrial Informatics, 2018, 14, 1323-1333.	7.2	37
97	Solving Complex-Valued Time-Varying Linear Matrix Equations via QR Decomposition With Applications to Robotic Motion Tracking and on Angle-of-Arrival Localization. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 3415-3424.	7.2	37
98	Revisit the Analog Computer and Gradient-Based Neural System for Matrix Inversion. , 0, , .		36
99	On exponential convergence of nonlinear gradient dynamics system with application to square root finding. Nonlinear Dynamics, 2015, 79, 983-1003.	2.7	36
100	Biâ€criteria optimal control of redundant robot manipulators using LVIâ€based primalâ€dual neural network. Optimal Control Applications and Methods, 2010, 31, 213-229.	1.3	35
101	Continuous and Discrete Zeroing Neural Network for Different-Level Dynamic Linear System With Robot Manipulator Control. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 4633-4642.	5.9	35
102	Simulation and Experimental Verification of Weighted Velocity and Acceleration Minimization for Robotic Redundancy Resolution. IEEE Transactions on Automation Science and Engineering, 2014, 11, 1203-1217.	3.4	34
103	General Square-Pattern Discretization Formulas via Second-Order Derivative Elimination for Zeroing Neural Network Illustrated by Future Optimization. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 891-901.	7.2	34
104	Superior robustness of power-sum activation functions in Zhang neural networks for time-varying quadratic programs perturbed with large implementation errors. Neural Computing and Applications, 2013, 22, 175-185.	3.2	33
105	Fault-tolerant motion planning and control of redundant manipulator. Control Engineering Practice, 2012, 20, 282-292.	3.2	32
106	Presentation, error analysis and numerical experiments on a group of 1-step-ahead numerical differentiation formulas. Journal of Computational and Applied Mathematics, 2013, 239, 406-414.	1.1	31
107	Zhang neural network and its application to Newton iteration for matrix square root estimation. Neural Computing and Applications, 2012, 21, 453-460.	3.2	30
108	New Discrete-Solution Model for Solving Future Different-Level Linear Inequality and Equality With Robot Manipulator Control. IEEE Transactions on Industrial Informatics, 2019, 15, 1975-1984.	7.2	30

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109	Equivalence of velocity-level and acceleration-level redundancy-resolution of manipulators. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 3450-3453.	0.9	29
110	Zhang Dynamics and Gradient Dynamics with Tracking-Control Application. , 2012, , .		29
111	Infinity-norm acceleration minimization of robotic redundant manipulators using the LVI-based primalâ€“dual neural network. Robotics and Computer-Integrated Manufacturing, 2009, 25, 358-365.	6.1	28
112	Common nature of learning between BP-type and Hopfield-type neural networks. Neurocomputing, 2015, 167, 578-586.	3.5	28
113	ZFD formula 4IgSFD_Y applied to future minimization. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 1677-1681.	0.9	28
114	Three-step general discrete-time Zhang neural network design and application to time-variant matrix inversion. Neurocomputing, 2018, 306, 108-118.	3.5	28
115	Comparison on Gradient-Based Neural Dynamics and Zhang Neural Dynamics for Online Solution of Nonlinear Equations. Lecture Notes in Computer Science, 2008, , 269-279.	1.0	28
116	Solving future equation systems using integral-type error function and using twice ZNN formula with disturbances suppressed. Journal of the Franklin Institute, 2019, 356, 2130-2152.	1.9	27
117	Minimum-Energy Redundancy Resolution of Robot Manipulators Unified by Quadratic Programming and its Online Solution. , 2007, , .		26
118	Bi-criteria Velocity Minimization of Robot Manipulators Using a Linear Variational Inequalities-Based Primal-Dual Neural Network and PUMA560 Example. Advanced Robotics, 2008, 22, 1479-1496.	1.1	26
119	Different Zhang functions leading to different ZNN models illustrated via time-varying matrix square roots finding. Expert Systems With Applications, 2013, 40, 4393-4403.	4.4	26
120	Neural Dynamics and Newtonâ€“Raphson Iteration for Nonlinear Optimization. Journal of Computational and Nonlinear Dynamics, 2014, 9, .	0.7	26
121	General 7-Instant DCZNN Model Solving Future Different-Level System of Nonlinear Inequality and Linear Equation. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 3204-3214.	7.2	26
122	Acceleration-level repetitive motion planning of redundant planar robots solved by a simplified LVI-based primal-dual neural network. Robotics and Computer-Integrated Manufacturing, 2013, 29, 328-343.	6.1	25
123	Physical-limits-constrained minimum velocity norm coordinating scheme for wheeled mobile redundant manipulators. Robotica, 2015, 33, 1325-1350.	1.3	25
124	Analysis and Verification of Repetitive Motion Planning and Feedback Control for Omnidirectional Mobile Manipulator Robotic Systems. Journal of Intelligent and Robotic Systems: Theory and Applications, 2014, 75, 393-411.	2.0	24
125	Adaptive Discrete ZND Models for Tracking Control of Redundant Manipulator. IEEE Transactions on Industrial Informatics, 2020, 16, 7360-7368.	7.2	24
126	A general recurrent neural network model for time-varying matrix inversion. , 0, , .		23

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127	On the Simplified LVI-based Primal-Dual Neural Network for Solving LP and QP Problems. , 2007, , .		23
128	Simulation and Comparison of Zhang Neural Network and Gradient Neural Network Solving for Time-Varying Matrix Square Roots. , 2008, , .		23
129	Continuous and discrete time Zhang dynamics for time-varying 4th root finding. Numerical Algorithms, 2011, 57, 35-51.	1.1	23
130	A new variant of the Zhang neural network for solving online time-varying linear inequalities. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 2255-2271.	1.0	23
131	Signum-function array activated ZNN with easier circuit implementation and finite-time convergence for linear systems solving. Information Processing Letters, 2017, 124, 30-34.	0.4	23
132	A weights-directly-determined simple neural network for nonlinear system identification. , 2008, , .		22
133	Different-level two-norm and infinity-norm minimization to remedy joint-torque instability/divergence for redundant robot manipulators. Robotics and Autonomous Systems, 2012, 60, 874-888.	3.0	22
134	ZG Control for Ship Course Tracking with Singularity Considered and Solved. , 2013, , .		22
135	Continuous-Time Varying Complex QR Decomposition via Zeroing Neural Dynamics. Neural Processing Letters, 2021, 53, 3573-3590.	2.0	22
136	Superior performance of using hyperbolic sine activation functions in ZNN illustrated via time-varying matrix square roots finding. Computer Science and Information Systems, 2012, 9, 1603-1625.	0.7	22
137	Further studies on zhang neural-dynamics and gradient dynamics for online nonlinear equations solving. , 2009, , .		21
138	Remedy scheme and theoretical analysis of joint-angle drift phenomenon for redundant robot manipulators. Robotics and Computer-Integrated Manufacturing, 2011, 27, 860-869.	6.1	21
139	Using GD to conquer the singularity problem of conventional controller for output tracking of nonlinear system of a class. Physics Letters, Section A: General, Atomic and Solid State Physics, 2013, 377, 1611-1614.	0.9	21
140	Zeroing Neural Dynamics and Models for Various Time-Varying Problems Solving with ZLSF Models as Minimization-Type and Euler-Type Special Cases [Research Frontier]. IEEE Computational Intelligence Magazine, 2019, 14, 52-60.	3.4	21
141	CP-activated WASD neuronet approach to Asian population prediction with abundant experimental verification. Neurocomputing, 2016, 198, 48-57.	3.5	20
142	State adjustment of redundant robot manipulator based on quadratic programming. Robotica, 2012, 30, 477-489.	1.3	19
143	Revisit and compare Ma equivalence and Zhang equivalence of minimum velocity norm (MVN) type. Advanced Robotics, 2016, 30, 416-430.	1.1	19
144	Jerk-level synchronous repetitive motion scheme with gradient-type and zeroing-type dynamics algorithms applied to dual-arm redundant robot system control. International Journal of Systems Science, 2017, 48, 2713-2727.	3.7	19

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145	RECURRENT NEURAL NETWORKS FOR REAL-TIME COMPUTATION OF INVERSE KINEMATICS OF REDUNDANT MANIPULATORS. Advances in Fuzzy Systems, 2004, , 299-319.	8.7	19
146	Zhang neural network without using time-derivative information for constant and time-varying matrix inversion. , 2008, , .		18
147	Weights and structure determination of multiple-input feed-forward neural network activated by Chebyshev polynomials of Class 2 via cross-validation. Neural Computing and Applications, 2014, 25, 1761-1770.	3.2	18
148	Combining WASP and ASF algorithms to forecast a Japan earthquake with Mj 7.2 or above. , 2016, , .		18
149	Discrete time-variant nonlinear optimization and system solving via integral-type error function and twice ZND formula with noises suppressed. Soft Computing, 2018, 22, 7129-7141.	2.1	18
150	Stepsize Interval Confirmation of General Four-Step DTZN Algorithm Illustrated With Future Quadratic Programming and Tracking Control of Manipulators. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2019, , 1-9.	5.9	18
151	Five-instant type discrete-time ZND solving discrete time-varying linear system, division and quadratic programming. Neurocomputing, 2019, 331, 323-335.	3.5	18
152	Convergence and stability results of Zhang neural network solving systems of time-varying nonlinear equations. , 2012, , .		17
153	GD-aided IOL (inputâ€“output linearisation) controller for handling affine-form nonlinear system with loose condition on relative degree. International Journal of Control, 2016, 89, 757-769.	1.2	17
154	Inverse-Free Discrete ZNN Models Solving for Future Matrix Pseudoinverse via Combination of Extrapolation and ZeaD Formulas. IEEE Transactions on Neural Networks and Learning Systems, 2021, 32, 2663-2675.	7.2	17
155	MATLAB Simulation and Comparison of Zhang Neural Network and Gradient Neural Network for Online Solution of Linear Time-Varying Matrix Equation AXBâ€‰â^'â€‰Câ€‰=â€‰0. Lecture Notes in Computer Science, 2008, , 68-75.	1.3	17
156	Different ZFs Leading to Various ZNN Models Illustrated via Online Solution of Time-Varying Underdetermined Systems of Linear Equations with Robotic Application. Lecture Notes in Computer Science, 2013, , 481-488.	1.0	17
157	Bi-criteria velocity minimization of robot manipulators using LVI-based primal-dual neural network and illustrated via PUMA560 robot arm. Robotica, 2010, 28, 525-537.	1.3	16
158	ZG controllers for output tracking of nonlinear mass-spring-damper mechanical system with division-by-zero problem solved. , 2013, , .		16
159	Time-varying matrix eigenanalyses via Zhang Neural Networks and look-ahead finite difference equations. Linear Algebra and Its Applications, 2019, 580, 417-435.	0.4	16
160	Online singular value decomposition of time-varying matrix via zeroing neural dynamics. Neurocomputing, 2020, 383, 314-323.	3.5	16
161	A dual neural network applied to drift-free resolution of five-link planar robot arm. , 2008, , .		15
162	Solving time-varying nonlinear inequalities using continuous and discrete-time Zhang dynamics. International Journal of Computer Mathematics, 2013, 90, 1114-1127.	1.0	15

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163	Challenging simulation practice (failure and success) on implicit tracking control of double-integrator system via Zhang-gradient method. Mathematics and Computers in Simulation, 2016, 120, 104-119.	2.4	15
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