

Yunong Zhang

List of Publications by Citations

Source: <https://exaly.com/author-pdf/3462275/yunong-zhang-publications-by-citations.pdf>

Version: 2024-04-24

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

412
papers

8,311
citations

51
h-index

78
g-index

530
ext. papers

10,710
ext. citations

4.1
avg, IF

6.91
L-index

#	Paper	IF	Citations
412	Design and analysis of a general recurrent neural network model for time-varying matrix inversion. <i>IEEE Transactions on Neural Networks</i> , 2005 , 16, 1477-90		322
411	A recurrent neural network for solving Sylvester equation with time-varying coefficients. <i>IEEE Transactions on Neural Networks</i> , 2002 , 13, 1053-63		314
410	A unified quadratic-programming-based dynamical system approach to joint torque optimization of physically constrained redundant manipulators. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2004 , 34, 2126-32		200
409	A dual neural network for redundancy resolution of kinematically redundant manipulators subject to joint limits and joint velocity limits. <i>IEEE Transactions on Neural Networks</i> , 2003 , 14, 658-67		175
408	Kinematic Control of Redundant Manipulators Using Neural Networks. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2017 , 28, 2243-2254	10.3	166
407	Integration-Enhanced Zhang Neural Network for Real-Time-Varying Matrix Inversion in the Presence of Various Kinds of Noises. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2016 , 27, 2615-2627	10.3	138
406	Obstacle avoidance for kinematically redundant manipulators using a dual neural network. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2004 , 34, 752-9		132
405	Modified ZNN for Time-Varying Quadratic Programming With Inherent Tolerance to Noises and Its Application to Kinematic Redundancy Resolution of Robot Manipulators. <i>IEEE Transactions on Industrial Electronics</i> , 2016 , 63, 6978-6988	8.9	128
404	From Zhang Neural Network to Newton Iteration for Matrix Inversion. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2009 , 56, 1405-1415	3.9	128
403	Comparison on Zhang neural dynamics and gradient-based neural dynamics for online solution of nonlinear time-varying equation. <i>Neural Computing and Applications</i> , 2011 , 20, 1-7	4.8	126
402	Control of pendulum tracking (including swinging up) of IPC system using zeroing-gradient method. <i>Nonlinear Dynamics</i> , 2017 , 89, 1-25	5	123
401	Performance Analysis of Gradient Neural Network Exploited for Online Time-Varying Matrix Inversion. <i>IEEE Transactions on Automatic Control</i> , 2009 , 54, 1940-1945	5.9	117
400	Noise-Tolerant ZNN Models for Solving Time-Varying Zero-Finding Problems: A Control-Theoretic Approach. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 992-997	5.9	116
399	Zhang neural network for online solution of time-varying convex quadratic program subject to time-varying linear-equality constraints. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009 , 373, 1639-1643	2.3	114
398	A dual neural network for convex quadratic programming subject to linear equality and inequality constraints. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2002 , 298, 271-278	2.3	112
397	. <i>IEEE Transactions on Industrial Electronics</i> , 2014 , 61, 6903-6914	8.9	110
396	. <i>IEEE Transactions on Industrial Informatics</i> , 2018 , 14, 3044-3053	11.9	106

395	A dual neural network for bi-criteria kinematic control of redundant manipulators. <i>IEEE Transactions on Automation Science and Engineering</i> , 2002 , 18, 923-931		98
394	Neural-Dynamic-Method-Based Dual-Arm CMG Scheme With Time-Varying Constraints Applied to Humanoid Robots. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2015 , 26, 3251-62	10.3	96
393	Discrete-Time Zhang Neural Network for Online Time-Varying Nonlinear Optimization With Application to Manipulator Motion Generation. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2015 , 26, 1525-31	10.3	93
392	G2-type SRMPC scheme for synchronous manipulation of two redundant robot arms. <i>IEEE Transactions on Cybernetics</i> , 2015 , 45, 153-64	10.2	87
391	Different Complex ZFs Leading to Different Complex ZNN Models for Time-Varying Complex Generalized Inverse Matrices. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2014 , 25, 1621-1631	10.3	85
390	A New Inequality-Based Obstacle-Avoidance MVN Scheme and Its Application to Redundant Robot Manipulators. <i>IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews</i> , 2012 , 42, 1326-1340		82
389	Zhang neural network solving for time-varying full-rank matrix Moore-Penrose inverse. <i>Computing (Vienna/New York)</i> , 2011 , 92, 97-121	2.2	82
388	Zhang neural network versus gradient neural network for solving time-varying linear inequalities. <i>IEEE Transactions on Neural Networks</i> , 2011 , 22, 1676-84		81
387	Global exponential stability of recurrent neural networks for synthesizing linear feedback control systems via pole assignment. <i>IEEE Transactions on Neural Networks</i> , 2002 , 13, 633-44		81
386	Design and experimentation of acceleration-level drift-free scheme aided by two recurrent neural networks. <i>IET Control Theory and Applications</i> , 2013 , 7, 25-42	2.5	75
385	Robust Zeroing Neural-Dynamics and Its Time-Varying Disturbances Suppression Model Applied to Mobile Robot Manipulators. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2018 , 29, 4385-4397	10.3	74
384	Discrete-time Zhang neural network of $O(B)$ pattern for time-varying matrix pseudoinversion with application to manipulator motion generation. <i>Neurocomputing</i> , 2014 , 142, 165-173	5.4	73
383	Repetitive Motion Planning and Control of Redundant Robot Manipulators 2013 ,		72
382	Li-function activated ZNN with finite-time convergence applied to redundant-manipulator kinematic control via time-varying Jacobian matrix pseudoinversion. <i>Applied Soft Computing Journal</i> , 2014 , 24, 158-168	7.5	70
381	A dual neural network for constrained joint torque optimization of kinematically redundant manipulators. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2002 , 32, 654-62		70
380	Taylor $O(h^2)$ Discretization of ZNN Models for Dynamic Equality-Constrained Quadratic Programming With Application to Manipulators. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2016 , 27, 225-37	10.3	69
379	A new performance index for the repetitive motion of mobile manipulators. <i>IEEE Transactions on Cybernetics</i> , 2014 , 44, 280-92	10.2	68
378	Variable Joint-Velocity Limits of Redundant Robot Manipulators Handled by Quadratic Programming. <i>IEEE/ASME Transactions on Mechatronics</i> , 2013 , 18, 674-686	5.5	67

377	Continuous and discrete Zhang dynamics for real-time varying nonlinear optimization. <i>Numerical Algorithms</i> , 2016 , 73, 115-140	2.1	66
376	Taylor-type 1-step-ahead numerical differentiation rule for first-order derivative approximation and ZNN discretization. <i>Journal of Computational and Applied Mathematics</i> , 2015 , 273, 29-40	2.4	65
375	Different-Level Redundancy-Resolution and Its Equivalent Relationship Analysis for Robot Manipulators Using Gradient-Descent and Zhang 's Neural-Dynamic Methods. <i>IEEE Transactions on Industrial Electronics</i> , 2012 , 59, 3146-3155	8.9	65
374	A set of nonlinear equations and inequalities arising in robotics and its online solution via a primal neural network. <i>Neurocomputing</i> , 2006 , 70, 513-524	5.4	62
373	Division by zero, pseudo-division by zero, Zhang dynamics method and Zhang-gradient method about control singularity conquering. <i>International Journal of Systems Science</i> , 2017 , 48, 1-12	2.3	61
372	Repetitive motion of redundant robots planned by three kinds of recurrent neural networks and illustrated with a four-link planar manipulator's straight-line example. <i>Robotics and Autonomous Systems</i> , 2009 , 57, 645-651	3.5	61
371	Repetitive motion planning of PA10 robot arm subject to joint physical limits and using LVI-based primal-dual neural network. <i>Mechatronics</i> , 2008 , 18, 475-485	3	61
370	Zhang neural network, Getz-Marsden dynamic system, and discrete-time algorithms for time-varying matrix inversion with application to robots' kinematic control. <i>Neurocomputing</i> , 2012 , 97, 22-32	5.4	60
369	Recurrent neural networks for nonlinear output regulation. <i>Automatica</i> , 2001 , 37, 1161-1173	5.7	60
368	Acceleration-Level Repetitive Motion Planning and Its Experimental Verification on a Six-Link Planar Robot Manipulator. <i>IEEE Transactions on Control Systems Technology</i> , 2013 , 21, 906-914	4.8	59
367	Acceleration-Level Cyclic-Motion Generation of Constrained Redundant Robots Tracking Different Paths. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2012 , 42, 1257-69		59
366	. <i>IEEE Transactions on Automation Science and Engineering</i> , 2017 , 14, 1337-1350	4.9	55
365	Two New Types of Zhang Neural Networks Solving Systems of Time-Varying Nonlinear Inequalities. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2012 , 59, 2363-2373	3.9	55
364	Zhang neural network for online solution of time-varying linear matrix inequality aided with an equality conversion. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2014 , 25, 370-82	10.3	53
363	From different ZFs to different ZNN models accelerated via Li activation functions to finite-time convergence for time-varying matrix pseudoinversion. <i>Neurocomputing</i> , 2014 , 133, 512-522	5.4	53
362	O(N ²)-Operation Approximation of Covariance Matrix Inverse in Gaussian Process Regression Based on Quasi-Newton BFGS Method. <i>Communications in Statistics Part B: Simulation and Computation</i> , 2007 , 36, 367-380	0.6	52
361	Enhanced discrete-time Zhang neural network for time-variant matrix inversion in the presence of bias noises. <i>Neurocomputing</i> , 2016 , 207, 220-230	5.4	51
360	Complex-valued Zhang neural network for online complex-valued time-varying matrix inversion. <i>Applied Mathematics and Computation</i> , 2011 , 217, 10066-10073	2.7	50

359	Global exponential convergence and stability of gradient-based neural network for online matrix inversion. <i>Applied Mathematics and Computation</i> , 2009 , 215, 1301-1306	2.7	49
358	Zeroing neural-dynamics approach and its robust and rapid solution for parallel robot manipulators against superposition of multiple disturbances. <i>Neurocomputing</i> , 2018 , 275, 845-858	5.4	48
357	Link Between and Comparison and Combination of Zhang Neural Network and Quasi-Newton BFGS Method for Time-Varying Quadratic Minimization. <i>IEEE Transactions on Cybernetics</i> , 2013 , 43, 490-503	10.2	48
356	Common nature of learning between back-propagation and Hopfield-type neural networks for generalized matrix inversion with simplified models. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2013 , 24, 579-92	10.3	47
355	Solving time-varying inverse kinematics problem of wheeled mobile manipulators using Zhang neural network with exponential convergence. <i>Nonlinear Dynamics</i> , 2014 , 76, 1543-1559	5	45
354	Cross-validation based weights and structure determination of Chebyshev-polynomial neural networks for pattern classification. <i>Pattern Recognition</i> , 2014 , 47, 3414-3428	7.7	44
353	Zhang neural network versus gradient-based neural network for time-varying linear matrix equation solving. <i>Neurocomputing</i> , 2011 , 74, 3708-3712	5.4	43
352	Time-varying square roots finding via Zhang dynamics versus gradient dynamics and the former's link and new explanation to Newton-Raphson iteration. <i>Information Processing Letters</i> , 2010 , 110, 1103-1109	9.8	43
351	QP-based refined manipulability-maximizing scheme for coordinated motion planning and control of physically constrained wheeled mobile redundant manipulators. <i>Nonlinear Dynamics</i> , 2016 , 85, 245-261	5	41
350	New Discretization-Formula-Based Zeroing Dynamics for Real-Time Tracking Control of Serial and Parallel Manipulators. <i>IEEE Transactions on Industrial Informatics</i> , 2018 , 14, 3416-3425	11.9	40
349	Time-series Gaussian Process Regression Based on Toeplitz Computation of $O(N^2)$ Operations and $O(N)$ -level Storage		40
348	Performance analysis of gradient neural network exploited for online time-varying quadratic minimization and equality-constrained quadratic programming. <i>Neurocomputing</i> , 2011 , 74, 1710-1719	5.4	39
347	General four-step discrete-time zeroing and derivative dynamics applied to time-varying nonlinear optimization. <i>Journal of Computational and Applied Mathematics</i> , 2019 , 347, 314-329	2.4	39
346	Zhang Functions and Various Models 2015 ,		38
345	Singularity-conquering tracking control of a class of chaotic systems using Zhang-gradient dynamics. <i>IET Control Theory and Applications</i> , 2015 , 9, 871-881	2.5	37
344	From Different Zhang Functions to Various ZNN Models Accelerated to Finite-Time Convergence for Time-Varying Linear Matrix Equation. <i>Neural Processing Letters</i> , 2014 , 39, 309-326	2.4	37
343	Simulation and verification of Zhang neural network for online time-varying matrix inversion. <i>Simulation Modelling Practice and Theory</i> , 2009 , 17, 1603-1617	3.9	37
342	Neural network-based discrete-time Z-type model of high accuracy in noisy environments for solving dynamic system of linear equations. <i>Neural Computing and Applications</i> , 2018 , 29, 1217-1232	4.8	36

341	Z-type neural-dynamics for time-varying nonlinear optimization under a linear equality constraint with robot application. <i>Journal of Computational and Applied Mathematics</i> , 2018 , 327, 155-166	2.4	36
340	Discrete-time ZD, GD and NI for solving nonlinear time-varying equations. <i>Numerical Algorithms</i> , 2013 , 64, 721-740	2.1	35
339	Novel Recurrent Neural Network for Time-Varying Problems Solving [Research Frontier]. <i>IEEE Computational Intelligence Magazine</i> , 2012 , 7, 61-65	5.6	35
338	New Discrete-Time ZNN Models for Least-Squares Solution of Dynamic Linear Equation System With Time-Varying Rank-Deficient Coefficient. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2018 , 29, 5767-5776	10.3	33
337	Singularity-conquering ZG controllers of z2g1 type for tracking control of the IPC system. <i>International Journal of Control</i> , 2014 , 87, 1729-1746	1.5	33
336	Support vector machine optimal control for mobile wheeled inverted pendulums with unmodelled dynamics. <i>Neurocomputing</i> , 2010 , 73, 2773-2782	5.4	33
335	Dynamic design, numerical solution and effective verification of acceleration-level obstacle-avoidance scheme for robot manipulators. <i>International Journal of Systems Science</i> , 2016 , 47, 932-945	2.3	31
334	Different Zhang functions leading to different Zhang-dynamics models illustrated via time-varying reciprocal solving. <i>Applied Mathematical Modelling</i> , 2012 , 36, 4502-4511	4.5	31
333	ZNN for solving online time-varying linear matrix-vector inequality via equality conversion. <i>Applied Mathematics and Computation</i> , 2015 , 259, 327-338	2.7	30
332	Tracking control of modified Lorenz nonlinear system using ZG neural dynamics with additive input or mixed inputs. <i>Neurocomputing</i> , 2016 , 196, 82-94	5.4	30
331	Different-Level Simultaneous Minimization of Joint-Velocity and Joint-Torque for Redundant Robot Manipulators. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2013 , 72, 301-323	3.9	30
330	Improved Zhang neural network model and its solution of time-varying generalized linear matrix equations. <i>Expert Systems With Applications</i> , 2010 , 37, 7213-7218	7.8	30
329	From Davidenko Method to Zhang Dynamics for Nonlinear Equation Systems Solving. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2017 , 47, 2817-2830	7.3	29
328	Infinitely many Zhang functions resulting in various ZNN models for time-varying matrix inversion with link to Drazin inverse. <i>Information Processing Letters</i> , 2015 , 115, 703-706	0.8	29
327	Minimum jerk norm scheme applied to obstacle avoidance of redundant robot arm with jerk bounded and feedback control. <i>IET Control Theory and Applications</i> , 2016 , 10, 1896-1903	2.5	29
326	Robustness analysis of the Zhang neural network for online time-varying quadratic optimization. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2010 , 43, 245202	2	29
325	Inverse-free computation for infinity-norm torque minimization of robot manipulators. <i>Mechatronics</i> , 2006 , 16, 177-184	3	29
324	Exploiting Hessian matrix and trust-region algorithm in hyperparameters estimation of Gaussian process. <i>Applied Mathematics and Computation</i> , 2005 , 171, 1264-1281	2.7	29

323	Different Zhang functions resulting in different ZNN models demonstrated via time-varying linear matrix-vector inequalities solving. <i>Neurocomputing</i> , 2013 , 121, 140-149	5.4	28
322	MATLAB Simulink modeling and simulation of LVI-based primal-dual neural network for solving linear and quadratic programs. <i>Neurocomputing</i> , 2009 , 72, 1679-1687	5.4	28
321	On exponential convergence of nonlinear gradient dynamics system with application to square root finding. <i>Nonlinear Dynamics</i> , 2015 , 79, 983-1003	5	27
320	Simulation and Experimental Verification of Weighted Velocity and Acceleration Minimization for Robotic Redundancy Resolution. <i>IEEE Transactions on Automation Science and Engineering</i> , 2014 , 11, 1203-1217 ²⁶	4.9	26
319	Fault-tolerant motion planning and control of redundant manipulator. <i>Control Engineering Practice</i> , 2012 , 20, 282-292	3.9	25
318	Infinity-norm acceleration minimization of robotic redundant manipulators using the LVI-based primal-dual neural network. <i>Robotics and Computer-Integrated Manufacturing</i> , 2009 , 25, 358-365	9.2	25
317	Bi-criteria optimal control of redundant robot manipulators using LVI-based primal-dual neural network. <i>Optimal Control Applications and Methods</i> , 2010 , 31, 213-229	1.7	25
316	Proposing and Validation of a New Four-Point Finite-Difference Formula With Manipulator Application. <i>IEEE Transactions on Industrial Informatics</i> , 2018 , 14, 1323-1333	11.9	24
315	Zhang neural network and its application to Newton iteration for matrix square root estimation. <i>Neural Computing and Applications</i> , 2012 , 21, 453-460	4.8	23
314	Z-type control of populations for Lotka-Volterra model with exponential convergence. <i>Mathematical Biosciences</i> , 2016 , 272, 15-23	3.9	23
313	Stepsize Range and Optimal Value for Taylor-Zhang Discretization Formula Applied to Zeroing Neurodynamics Illustrated via Future Equality-Constrained Quadratic Programming. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2019 , 30, 959-966	10.3	23
312	Common nature of learning between BP-type and Hopfield-type neural networks. <i>Neurocomputing</i> , 2015 , 167, 578-586	5.4	22
311	General Square-Pattern Discretization Formulas via Second-Order Derivative Elimination for Zeroing Neural Network Illustrated by Future Optimization. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2019 , 30, 891-901	10.3	22
310	Minimum-Energy Redundancy Resolution of Robot Manipulators Unified by Quadratic Programming and its Online Solution 2007 ,		22
309	Two New Discrete-Time Neurodynamic Algorithms Applied to Online Future Matrix Inversion With Nonsingular or Sometimes-Singular Coefficient. <i>IEEE Transactions on Cybernetics</i> , 2019 , 49, 2032-2045	10.2	22
308	Neural Dynamics and Newton-Raphson Iteration for Nonlinear Optimization. <i>Journal of Computational and Nonlinear Dynamics</i> , 2014 , 9,	1.4	21
307	Bi-criteria Velocity Minimization of Robot Manipulators Using a Linear Variational Inequalities-Based Primal-Dual Neural Network and PUMA560 Example. <i>Advanced Robotics</i> , 2008 , 22, 1479-1496	1.7	21
306	Revisit the Analog Computer and Gradient-Based Neural System for Matrix Inversion		21

305	Zeroing Dynamics, Gradient Dynamics, and Newton Iterations		21
304	Superior robustness of power-sum activation functions in Zhang neural networks for time-varying quadratic programs perturbed with large implementation errors. <i>Neural Computing and Applications</i> , 2013 , 22, 175-185	4.8	20
303	Presentation, error analysis and numerical experiments on a group of 1-step-ahead numerical differentiation formulas. <i>Journal of Computational and Applied Mathematics</i> , 2013 , 239, 406-414	2.4	20
302	Continuous and discrete time Zhang dynamics for time-varying 4th root finding. <i>Numerical Algorithms</i> , 2011 , 57, 35-51	2.1	20
301	New Discrete-Time Models of Zeroing Neural Network Solving Systems of Time-Variant Linear and Nonlinear Inequalities. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2020 , 50, 565-576	7.3	20
300	Signum-function array activated ZNN with easier circuit implementation and finite-time convergence for linear systems solving. <i>Information Processing Letters</i> , 2017 , 124, 30-34	0.8	19
299	Physical-limits-constrained minimum velocity norm coordinating scheme for wheeled mobile redundant manipulators. <i>Robotica</i> , 2015 , 33, 1325-1350	2.1	19
298	Three-step general discrete-time Zhang neural network design and application to time-variant matrix inversion. <i>Neurocomputing</i> , 2018 , 306, 108-118	5.4	19
297	Acceleration-level repetitive motion planning of redundant planar robots solved by a simplified LVI-based primal-dual neural network. <i>Robotics and Computer-Integrated Manufacturing</i> , 2013 , 29, 328-343	9.2	19
296	Equivalence of velocity-level and acceleration-level redundancy-resolution of manipulators. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009 , 373, 3450-3453	2.3	19
295	Remedy scheme and theoretical analysis of joint-angle drift phenomenon for redundant robot manipulators. <i>Robotics and Computer-Integrated Manufacturing</i> , 2011 , 27, 860-869	9.2	19
294	ZFD formula 4I g SFD_Y applied to future minimization. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2017 , 381, 1677-1681	2.3	18
293	New Discrete-Solution Model for Solving Future Different-Level Linear Inequality and Equality With Robot Manipulator Control. <i>IEEE Transactions on Industrial Informatics</i> , 2019 , 15, 1975-1984	11.9	18
292	On the Simplified LVI-based Primal-Dual Neural Network for Solving LP and QP Problems 2007 ,		18
291	Continuous and Discrete Zeroing Neural Network for Different-Level Dynamic Linear System With Robot Manipulator Control. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2020 , 50, 4633-4642	7.3	18
290	Different-level two-norm and infinity-norm minimization to remedy joint-torque instability/divergence for redundant robot manipulators. <i>Robotics and Autonomous Systems</i> , 2012 , 60, 874-888	3.5	17
289	Different Zhang functions leading to different ZNN models illustrated via time-varying matrix square roots finding. <i>Expert Systems With Applications</i> , 2013 , 40, 4393-4403	7.8	16
288	Using GD to conquer the singularity problem of conventional controller for output tracking of nonlinear system of a class. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2013 , 377, 1611-1614	2.3	16

287	Comparison on Gradient-Based Neural Dynamics and Zhang Neural Dynamics for Online Solution of Nonlinear Equations. <i>Lecture Notes in Computer Science</i> , 2008 , 269-279	0.9	16
286	Simulation and Comparison of Zhang Neural Network and Gradient Neural Network Solving for Time-Varying Matrix Square Roots 2008 ,		15
285	Superior performance of using hyperbolic sine activation functions in ZNN illustrated via time-varying matrix square roots finding. <i>Computer Science and Information Systems</i> , 2012 , 9, 1603-1625	0.8	15
284	Different ZFs Leading to Various ZNN Models Illustrated via Online Solution of Time-Varying Underdetermined Systems of Linear Equations with Robotic Application. <i>Lecture Notes in Computer Science</i> , 2013 , 481-488	0.9	15
283	General 7-Instant DCZNN Model Solving Future Different-Level System of Nonlinear Inequality and Linear Equation. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2020 , 31, 3204-3214	10.3	15
282	Solving time-varying nonlinear inequalities using continuous and discrete-time Zhang dynamics. <i>International Journal of Computer Mathematics</i> , 2013 , 90, 1114-1127	1.2	14
281	A new variant of the Zhang neural network for solving online time-varying linear inequalities. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012 , 468, 2255-2271	2.4	14
280	State adjustment of redundant robot manipulator based on quadratic programming. <i>Robotica</i> , 2012 , 30, 477-489	2.1	14
279	A weights-directly-determined simple neural network for nonlinear system identification 2008 ,		14
278	CP-activated WASD neuronet approach to Asian population prediction with abundant experimental verification. <i>Neurocomputing</i> , 2016 , 198, 48-57	5.4	13
277	GD-aided IOL (input-output linearisation) controller for handling affine-form nonlinear system with loose condition on relative degree. <i>International Journal of Control</i> , 2016 , 89, 757-769	1.5	13
276	Analysis and Verification of Repetitive Motion Planning and Feedback Control for Omnidirectional Mobile Manipulator Robotic Systems. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2014 , 75, 393-411	2.9	13
275	ZG Control for Ship Course Tracking with Singularity Considered and Solved 2013 ,		13
274	Zhang Dynamics and Gradient Dynamics with Tracking-Control Application 2012 ,		13
273	Zhang neural network without using time-derivative information for constant and time-varying matrix inversion 2008 ,		13
272	Weights and structure determination of multiple-input feed-forward neural network activated by Chebyshev polynomials of Class 2 via cross-validation. <i>Neural Computing and Applications</i> , 2014 , 25, 1761-1770	4.8	12
271	2009 ,		12
270	Bi-criteria velocity minimization of robot manipulators using LVI-based primal-dual neural network and illustrated via PUMA560 robot arm. <i>Robotica</i> , 2010 , 28, 525-537	2.1	12

269	A dual neural network applied to drift-free resolution of five-link planar robot arm 2008 ,		12
268	RECURRENT NEURAL NETWORKS FOR REAL-TIME COMPUTATION OF INVERSE KINEMATICS OF REDUNDANT MANIPULATORS. <i>Advances in Fuzzy Systems</i> , 2004 , 299-319		12
267	Solving future equation systems using integral-type error function and using twice ZNN formula with disturbances suppressed. <i>Journal of the Franklin Institute</i> , 2019 , 356, 2130-2152	4	12
266	Solving Future Different-Layer Nonlinear and Linear Equation System Using New Eight-Node DZNN Model. <i>IEEE Transactions on Industrial Informatics</i> , 2020 , 16, 2280-2289	11.9	12
265	. <i>IEEE Computational Intelligence Magazine</i> , 2019 , 14, 52-60	5.6	11
264	Stepsize Interval Confirmation of General Four-Step DTZN Algorithm Illustrated With Future Quadratic Programming and Tracking Control of Manipulators. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2019 , 1-9	7.3	11
263	Discrete time-variant nonlinear optimization and system solving via integral-type error function and twice ZND formula with noises suppressed. <i>Soft Computing</i> , 2018 , 22, 7129-7141	3.5	11
262	Revisit and compare Ma equivalence and Zhang equivalence of minimum velocity norm (MVN) type. <i>Advanced Robotics</i> , 2016 , 30, 416-430	1.7	11
261	Solution of nonlinear equations by continuous- and discrete-time Zhang dynamics and more importantly their links to Newton iteration 2009 ,		11
260	Bernoulli Neural Network with Weights Directly Determined and with the Number of Hidden- Layer Neurons Automatically Determined. <i>Lecture Notes in Computer Science</i> , 2009 , 36-45	0.9	11
259	Effective parameter range for equivalence of velocity-level and acceleration-level redundancy resolution schemes. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2012 , 376, 1736-1739	2.3	10
258	Jerk-level synchronous repetitive motion scheme with gradient-type and zeroing-type dynamics algorithms applied to dual-arm redundant robot system control. <i>International Journal of Systems Science</i> , 2017 , 48, 2713-2727	2.3	10
257	Simpler ZD-achieving controller for chaotic systems synchronization with parameter perturbation, model uncertainty and external disturbance as compared with other controllers. <i>Optik</i> , 2017 , 131, 364-373	2.5	10
256	On the LVI-based numerical method (E47 algorithm) for solving quadratic programming problems 2011 ,		10
255	Log-det approximation based on uniformly distributed seeds and its application to Gaussian process regression. <i>Journal of Computational and Applied Mathematics</i> , 2008 , 220, 198-214	2.4	10
254	Time-Varying Moore-Penrose Inverse Solving Shows Different Zhang Functions Leading to Different ZNN Models. <i>Lecture Notes in Computer Science</i> , 2012 , 98-105	0.9	10
253	Stepsize domain confirmation and optimum of ZeaD formula for future optimization. <i>Numerical Algorithms</i> , 2019 , 81, 561-574	2.1	10
252	Step-width theoretics and numerics of four-point general DTZN model for future minimization using Jury stability criterion. <i>Neurocomputing</i> , 2019 , 357, 231-239	5.4	9

251	Time-varying matrix eigenanalyses via Zhang Neural Networks and look-ahead finite difference equations. <i>Linear Algebra and Its Applications</i> , 2019 , 580, 417-435	0.9	9
250	A time-varying coefficient-based manipulability-maximizing scheme for motion control of redundant robots subject to varying joint-velocity limits. <i>Optimal Control Applications and Methods</i> , 2013 , 34, 202-215	1.7	9
249	Convergence and stability results of Zhang neural network solving systems of time-varying nonlinear equations 2012 ,		9
248	Manipulability-maximizing self-motion planning and control of redundant manipulators with experimental validation 2012 ,		9
247	Common Nature of Learning Exemplified by BP and Hopfield Neural Networks for Solving Online a System of Linear Equations 2008 ,		9
246	Solving Complex-Valued Time-Varying Linear Matrix Equations via QR Decomposition With Applications to Robotic Motion Tracking and on Angle-of-Arrival Localization. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2021 , PP,	10.3	9
245	Adaptive Discrete ZND Models for Tracking Control of Redundant Manipulator. <i>IEEE Transactions on Industrial Informatics</i> , 2020 , 16, 7360-7368	11.9	8
244	Challenging simulation practice (failure and success) on implicit tracking control of double-integrator system via Zhang-gradient method. <i>Mathematics and Computers in Simulation</i> , 2016 , 120, 104-119	3.3	8
243	Z-type and G-type models for time-varying inverse square root (TVISR) solving. <i>Soft Computing</i> , 2013 , 17, 2021-2032	3.5	8
242	A new type of recurrent neural networks for real-time solution of Lyapunov equation with time-varying coefficient matrices. <i>Mathematics and Computers in Simulation</i> , 2013 , 92, 40-52	3.3	8
241	Complete theory for E47 and 94LVI algorithms solving inequality-and-bound constrained quadratic program efficiently 2015 ,		8
240	Inequality-based Manipulator-Obstacle Avoidance Using the LVI-based Primal-dual Neural Network 2006 ,		8
239	Zhang-Gradient Controllers of Z0G0, Z1G0 and Z1G1 Types for Output Tracking of Time-Varying Linear Systems with Control-Singularity Conquered Finally. <i>Lecture Notes in Computer Science</i> , 2013 , 533-540	0.9	8
238	Online singular value decomposition of time-varying matrix via zeroing neural dynamics. <i>Neurocomputing</i> , 2020 , 383, 314-323	5.4	8
237	New five-step DTZD algorithm for future nonlinear minimization with quartic steady-state error pattern. <i>Numerical Algorithms</i> , 2019 , 81, 1043-1065	2.1	8
236	ZD, ZG and IOL Controllers and Comparisons for Nonlinear System Output Tracking with DBZ Problem Conquered in Different Relative-Degree Cases. <i>Asian Journal of Control</i> , 2017 , 19, 1482-1495	1.7	7
235	Analysis, Verification and Comparison on Feedback-Aided MA Equivalence and Zhang Equivalency of Minimum-Kinetic-Energy Type for Kinematic Control of Redundant Robot Manipulators. <i>Asian Journal of Control</i> , 2018 , 20, 2154-2170	1.7	7
234	A 5-instant finite difference formula to find discrete time-varying generalized matrix inverses, matrix inverses, and scalar reciprocals. <i>Numerical Algorithms</i> , 2019 , 81, 609-629	2.1	7

233	Simultaneous repetitive motion planning of two redundant robot arms for acceleration-level cooperative manipulation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2013 , 377, 1979-1983	2.3	7
232	Controller design of nonlinear system for fully trackable and partially trackable paths by combining ZD and GD 2013 ,		7
231	Encoder based online motion planning and feedback control of redundant manipulators. <i>Control Engineering Practice</i> , 2013 , 21, 1277-1289	3.9	7
230	Pruning-included weights and structure determination of 2-input neuronet using Chebyshev polynomials of Class 1 2012 ,		7
229	Zhang Neural Network for Online Solution of Time-Varying Sylvester Equation 2007 , 276-285		7
228	Zhang Neural Network Versus Gradient Neural Network for Online Time-Varying Quadratic Function Minimization. <i>Lecture Notes in Computer Science</i> , 2008 , 807-814	0.9	7
227	Continuous-Time Varying Complex QR Decomposition via Zeroing Neural Dynamics. <i>Neural Processing Letters</i> , 2021 , 53, 3573	2.4	7
226	Combining WASP and ASF algorithms to forecast a Japan earthquake with Mj 7.2 or above 2016 ,		7
225	Five-instant type discrete-time ZND solving discrete time-varying linear system, division and quadratic programming. <i>Neurocomputing</i> , 2019 , 331, 323-335	5.4	7
224	Growing-type WASD for power-activation neuronet to model and forecast monthly time series 2013 ,		6
223	USA future war prediction using ASF method with 3 inputs and full traversal: No new war till 2030 or 2034 though 2021, 2023, 2027 and 2032 risky? 2017 ,		6
222	ZG stabilization and tracking control for bilinear system of u-integration type 2015 ,		6
221	2014 ,		6
220	ZG tracking control of Lu system with multiple inputs and with division-by-zero problem solved 2014 ,		6
219	ZG trajectory generation of Van der Pol oscillator in affine-control form with division-by-zero problem handled 2014 ,		6
218	Different Zhang functions leading to various ZNN models illustrated via solving the time-varying overdetermined system of linear equations 2013 ,		6
217	Bi-criteria torque minimization of redundant robot arms with schemes, models and methods compared 2009 ,		6
216	On the Variable Step-Size of Discrete-Time Zhang Neural Network and Newton Iteration for Constant Matrix Inversion 2008 ,		6

215	MATLAB Simulation of Gradient-Based Neural Network for Online Matrix Inversion. <i>Lecture Notes in Computer Science</i> , 2007 , 98-109	0.9	6
214	A general recurrent neural network model for time-varying matrix inversion		6
213	MATLAB Simulation and Comparison of Zhang Neural Network and Gradient Neural Network for Online Solution of Linear Time-Varying Matrix Equation $AXB \dot{C} = 0$. <i>Lecture Notes in Computer Science</i> , 2008 , 68-75	0.9	6
212	Comparison on Continuous-Time Zhang Dynamics and Newton-Raphson Iteration for Online Solution of Nonlinear Equations. <i>Lecture Notes in Computer Science</i> , 2011 , 393-402	0.9	6
211	Sine neural network (SNN) with double-stage weights and structure determination (DS-WASD). <i>Soft Computing</i> , 2016 , 20, 211-221	3.5	5
210	New Models for Future Problems Solving by Using ZND Method, Correction Strategy and Extrapolation Formulas. <i>IEEE Access</i> , 2019 , 7, 84536-84544	3.5	5
209	Predictions of USA Presidential Parties From 2021 to 2037 Using Historical Data Through Square Wave-Activated WASD Neural Network. <i>IEEE Access</i> , 2020 , 8, 56630-56640	3.5	5
208	ZD Method Based Nonlinear and Robust Control of Agitator Tank. <i>Asian Journal of Control</i> , 2018 , 20, 1464-1479	1.7	5
207	Discrete-Time ZND Models Solving ALRMPC via Eight-Instant General and Other Formulas of ZeaD. <i>IEEE Access</i> , 2019 , 7, 125909-125918	3.5	5
206	New DTZNN model for future minimization with cube steady-state error pattern using Taylor finite-difference formula 2015 ,		5
205	Simply and effectively proved square characteristics of discrete-time zd solving systems of time-varying nonlinear equations 2015 ,		5
204	Acceleration-Level Minimum Kinetic Energy (MKE) Scheme Derived via Ma Equivalence for Motion Planning of Redundant Robot Manipulators 2014 ,		5
203	A weighted damping coefficient based manipulability maximizing scheme for coordinated motion planning of wheeled mobile manipulators 2014 ,		5
202	Discrete-time Zhang neural network and numerical algorithm for time-varying linear equations solving 2011 ,		5
201	More than Newton iterations generalized from Zhang neural network for constant matrix inversion aided with line-search algorithm 2010 ,		5
200	Linear programming versus quadratic programming in robots' repetitive redundancy resolution: A chattering phenomenon investigation 2009 ,		5
199	Growing-type weights and structure determination of 2-input Legendre orthogonal polynomial neuronet 2012 ,		5
198	Euler Neural Network with Its Weight-Direct-Determination and Structure-Automatic-Determination Algorithms 2009 ,		5

197	MATLAB Simulink Modeling of Zhang Neural Network Solving for Time-Varying Pseudoinverse in Comparison with Gradient Neural Network 2008 ,		5
196	Self-motion planning of redundant robot manipulators based on quadratic program and shown via PA10 example 2008 ,		5
195	Growing Algorithm of Laguerre Orthogonal Basis Neural Network with Weights Directly Determined. <i>Lecture Notes in Computer Science</i> , 2008 , 60-67	0.9	5
194	Repetitive Motion Planning of Kinematically Redundant Manipulators Using LVI-based Primal-Dual Neural Network 2007 ,		5
193	Discrete-time zeroing neural network for solving time-varying Sylvester-transpose matrix inequation via exp-aided conversion. <i>Neurocomputing</i> , 2020 , 386, 126-135	5.4	5
192	Continuous and discrete zeroing neural dynamics handling future unknown-transpose matrix inequality as well as scalar inequality of linear class. <i>Numerical Algorithms</i> , 2020 , 83, 529-547	2.1	5
191	Different-level algorithms for control of robotic systems. <i>Applied Mathematical Modelling</i> , 2020 , 77, 922-933	4.3	5
190	Zeroing dynamics based motion control scheme for parallel manipulators. <i>Electronics Letters</i> , 2017 , 53, 74-75	1.1	4
189	Discrete-time nonlinear optimization via zeroing neural dynamics based on explicit linear multi-step methods for tracking control of robot manipulators. <i>Neurocomputing</i> , 2020 , 412, 477-485	5.4	4
188	Numerical extrapolation of important date sequence by addition-subtraction frequency (ASF) algorithm 2017 ,		4
187	Case study of Zhang matrix inverse for different ZFs leading to different nets 2014 ,		4
186	Solving for time-varying and static cube roots in real and complex domains via discrete-time ZD models. <i>Neural Computing and Applications</i> , 2013 , 23, 255-268	4.8	4
185	Twice-Pruning Aided WASD Neuronet of Bernoulli-Polynomial Type with Extension to Robust Classification 2013 ,		4
184	The link and comparison between velocity-level and acceleration-level repetitive motion planning schemes verified via PA10 robot arm. <i>Mechanism and Machine Theory</i> , 2013 , 69, 245-262	4	4
183	Zhang-Gradient Controllers for Tracking Control of Multiple-Integrator Systems. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2015 , 137,	1.6	4
182	Chebyshev-polynomial neuronet, WASD algorithm and world population prediction from past 10000-year rough data 2015 ,		4
181	Restoration of missing time-series data via multiple sine functions decomposition with Guangzhou-temperature application 2014 ,		4
180	Solving the Problem of Runge Phenomenon by Pseudoinverse Cubic Spline 2014 ,		4

179	ZG controllers for output tracking of nonlinear mass-spring-damper mechanical system with division-by-zero problem solved 2013 ,	4
178	Convergence analysis of Zhang neural networks solving time-varying linear equations but without using time-derivative information 2010 ,	4
177	Time-varying complex reciprocals solved by ZD via different complex Zhang functions 2012 ,	4
176	Design and implementation of a zero-initial-velocity self-motion scheme on a six-DOF planar robot manipulator. <i>Industrial Robot</i> , 2012 , 39, 401-411	1.4 4
175	Complex ZNN and GNN models for time-varying complex quadratic programming subject to equality constraints 2016 ,	4
174	The second-order ZD, GD and hybrid systems solving nonlinear equations compared with other dynamics 2016 ,	4
173	Euler-precision general-form of Zhang et al discretization (ZeaD) formulas, derivation, and numerical experiments 2018 ,	4
172	Robust Zhang Neural Network for Tracking Control of Parallel Robot Manipulators With Unknown Parameters 2019 ,	3
171	Jerk-level cyclic motion planning and control for constrained redundant robot manipulators using Zhang dynamics: Theoretics 2018 ,	3
170	Different complex ZFs leading to different complex ZNN models for time-varying complex matrix inversion 2013 ,	3
169	Proposing, QP-unification and verification of DLSM based MKE-IIWT scheme for redundant robot manipulators 2017 ,	3
168	Possible M7.0-or-above chile earthquake numerically projected via full-traversal addition-subtraction frequency method 2017 ,	3
167	Warming substantiated by multiple sine functions decomposition of multiple cities' temperature data 2015 ,	3
166	New formula of 4-instant g-square finite difference (4lgSFD) applied to time-variant matrix inversion 2015 ,	3
165	Near future prediction of European population through Chebyshev-activation WASD neuronet 2015 ,	3
164	ZG controller groups for two-output tracking of two-input Brockett integrator 2014 ,	3
163	Two numerical algorithms and numerical experiments for efficiently solving inequality-and-bound constrained QP 2014 ,	3
162	Zhang equivalence of different-level robotic schemes: An MVN case study based on PA10 robot manipulator 2013 ,	3

161	Minimum movement scheme with wheels and joints coordinated simultaneously for mobile redundant manipulator 2013 ,		3
160	2011 ,		3
159	Broyden-Method Aided Discrete ZNN Solving the Systems of Time-Varying Nonlinear Equations 2012 ,		3
158	Feedback-Type MWVN Scheme and Its Acceleration-Level Equivalent Scheme Proved by Zhang Dynamics 2012 ,		3
157	Weights and structure determination (WASD) of multiple-input hermit orthogonal polynomials neural network (MIHOPNN) 2012 ,		3
156	Cyclic motion generation of multi-link planar robot performing square end-effector trajectory analyzed via gradient-descent and Zhang et al's neural-dynamic methods 2008 ,		3
155	MATLAB Simulink Modeling and Simulation of Zhang Neural Network for Online Time-Varying Matrix Inversion 2008 ,		3
154	An Efficient Artificial Immune Network with Elite-Learning 2007 ,		3
153	Discrete ZNN models of Adams-Bashforth (AB) type solving various future problems with motion control of mobile manipulator. <i>Neurocomputing</i> , 2020 , 384, 84-93	5-4	3
152	ZD controller for synchronization of Lu chaotic systems with one input 2016 ,		3
151	Complete framework of jerk-level inverse-free solutions to inverse kinematics of redundant robot manipulators 2016 ,		3
150	Sigmoid function aided Zhang dynamics control for output tracking of time-varying linear system with bounded input 2016 ,		3
149	From mathematical equivalence such as Ma equivalence to generalized Zhang equivalency including gradient equivalency. <i>Theoretical Computer Science</i> , 2020 , 817, 44-54	1.1	3
148	Inverse-Free Discrete ZNN Models Solving for Future Matrix Pseudoinverse via Combination of Extrapolation and ZeaD Formulas. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2021 , 32, 2663-2675	10.3	3
147	Time-varying Schur decomposition via Zhang neural dynamics. <i>Neurocomputing</i> , 2021 , 419, 251-258	5-4	3
146	General Ten-Instant DTDMSR Model for Dynamic Matrix Square Root Finding. <i>Cybernetics and Systems</i> , 2021 , 52, 127-143	1-9	3
145	Concise Discrete ZNN Controllers for End-Effector Tracking and Obstacle Avoidance of Redundant Manipulators. <i>IEEE Transactions on Industrial Informatics</i> , 2021 , 1-1	11.9	3
144	ZG tracking control of 3-input 3-output nonlinear system with GD used additionally once more 2015 ,		2

143	Tracking and stabilizing Chen chaotic system via one multiplicative coefficient as Zhang-gradient control input 2015 ,	2
142	Numerical prediction of short-term snowy weather in Guangzhou via addition-subtraction frequency (ASF) algorithm with unequally half traversal 2017 ,	2
141	Zhang dynamics tracking control of varactor system with stability analysis 2017 ,	2
140	Optimal zeroing dynamics with applications to control of serial and parallel manipulators. <i>Optimal Control Applications and Methods</i> , 2018 , 39, 1393-1406	1.7 2
139	Output Tracking of Time-Varying Linear and Nonlinear Systems Using ZN and ZG Controllers with Pseudo Division-by-Zero Phenomena Shown 2018 ,	2
138	Z-type and G-type ZISR (Zhang inverse square root) solving 2013 ,	2
137	New ZFD (Zhang finite difference) formula 4lgSFD_L for time-varying reciprocal and inverse computation 2017 ,	2
136	Three-state space reformulation and control of MD-included one-link robot system using direct-derivative and zhang-dynamics methods 2017 ,	2
135	Potential Mw8.1-or-above Japan earthquake before 2020 numerically predicted via ASF method 2017 ,	2
134	Acceleration-level fault-tolerant scheme for redundant manipulator motion planning and control: Theoretics 2017 ,	2
133	Discrete time-varying four fundamental operations implemented by Euler forward difference 2017 ,	2
132	ZG control for nonlinear system 2-output tracking with GD used additionally once more 2015 ,	2
131	Inverse-free solution of Z1G1 type to acceleration-level inverse kinematics of redundant robot manipulators 2015 ,	2
130	QP-based smoother self-motion planning and control of redundant manipulators using ZD variant with effective verifications 2015 ,	2
129	ZG control for 2-output tracking of 3-input nonlinear system with GD used additionally twice more 2015 ,	2
128	Fast, finite, accurate and optimal WASD neuronet versus slow, infinite, inaccurate and rough BP neuronet illustrated via russia population prediction 2015 ,	2
127	Power-Activated WASD Neuronet Based Russian Population Estimation, Correction, and Prediction 2014 ,	2
126	WASP neuronet activated by bipolar-sigmoid functions and applied to glomerular-filtration-rate estimation 2014 ,	2

125	Zhang-gradient tracking controllers of Z1G0 and Z1G1 types for time-invariant linear systems 2012,		2
124	2012,		2
123	Quadratic-programming based self-motion planning with no target-configuration assigned for planar robot arms 2010,		2
122	Minimum-effort redundancy resolution of robot manipulators unified by quadratic programming 2011,		2
121	More illustrative investigation on window-shaped obstacle avoidance of robot manipulators using a simplified LVI-based primal-dual neural network 2009,		2
120	Self-motion planning of functionally redundant PUMA560 manipulator via quadratic-program formulation and solution 2009,		2
119	Unification and comparison on bi-criteria velocity, acceleration and torque minimization illustrated via three-link planar robot arm 2011,		2
118	Three nonlinearly-activated discrete-Time ZNN models for time-varying matrix inversion 2012,		2
117	Equivalent relationship between velocity- and acceleration-level redundancy-resolution schemes exemplified via multi-link planar robot arms 2009,		2
116	Cyclic Motion Planning of Redundant Robot Arms: Simple Extension of Performance Index May Not Work 2008,		2
115	Comparison on Zhang neural network and gradient neural network for time-varying linear matrix equation $AXB = C$ solving 2008,		2
114	Obstacle avoidance of redundant manipulators using a dual neural network		2
113	GMDS-ZNN Model 3 and its Ten-Instant Discrete Algorithm for Time-Variant Matrix Inversion Compared With Other Multiple-Instant Ones. <i>IEEE Access</i> , 2020 , 8, 228188-228198	3.5	2
112	MATLAB Simulation and Comparison of Zhang Neural Network and Gradient Neural Network for Time-Varying Lyapunov Equation Solving. <i>Lecture Notes in Computer Science</i> , 2008 , 117-127	0.9	2
111	General and Improved Five-Step Discrete-Time Zeroing Neural Dynamics Solving Linear Time-Varying Matrix Equation with Unknown Transpose. <i>Neural Processing Letters</i> , 2020 , 51, 1715-1730	2.4	2
110	New zeroing neural dynamics models for diagonalization of symmetric matrix stream. <i>Numerical Algorithms</i> , 2020 , 85, 849-866	2.1	2
109	Discrete-Time Advanced Zeroing Neurodynamic Algorithm Applied to Future Equality-Constrained Nonlinear Optimization With Various Noises. <i>IEEE Transactions on Cybernetics</i> , 2020 , PP,	10.2	2
108	Discrete-time formulation, control, solution and verification of pendulum systems with zeroing neural dynamics. <i>Theoretical Computer Science</i> , 2020 , 817, 33-43	1.1	2

107	Future Different-Layer Linear Equation and Bounded Inequality Solved by Combining Adams-Bashforth Methods With CZNN Model. <i>IEEE Transactions on Industrial Electronics</i> , 2021 , 68, 1515-1524	8.9	2
106	Continuous and discrete zeroing dynamics models using JMP function array and design formula for solving time-varying Sylvester-transpose matrix inequality. <i>Numerical Algorithms</i> , 2021 , 86, 1591-1614	2.1	2
105	Posture coordination control of two-manipulator system using projection neural network. <i>Neurocomputing</i> , 2021 , 427, 179-190	5.4	2
104	. <i>IEEE Transactions on Industrial Informatics</i> , 2021 , 17, 5164-5174	11.9	2
103	Using full-traversal addition-subtraction frequency (ASF) method to predict possible el nino events in 2019,2020 and so forth 2018 ,		2
102	Presentation, Derivation and Numerical Experiments of a Group of Extrapolation Formulas 2019 ,		1
101	New-Type DTZ Model for Solving Discrete Time-Dependent Nonlinear Equation System With Robotic-Arm Application 2020 ,		1
100	Output optimization of scalar and 2-dimension time-varying nonlinear systems using zeroing dynamics. <i>Asian Journal of Control</i> , 2020 , 23, 1643	1.7	1
99	Event-triggered zeroing dynamics for motion control of Stewart platform. <i>Journal of the Franklin Institute</i> , 2020 , 357, 6453-6470	4	1
98	2017 ,		1
97	Cooperative-manipulation scheme of routh-hurwitz type for simultaneous repetitive motion planning of two-manipulator robotic systems 2016 ,		1
96	2016 ,		1
95	A potential saturation value of world population is near? 2016 ,		1
94	Performance analysis of LVI-based PDNN applied to real-time solution of time-varying quadratic programming 2014 ,		1
93	ZE in iZ1eD1 manner for MKE redundancy resolution at velocity and acceleration levels 2014 ,		1
92	Theory and Substantiation of z0g1 Controller Conquering Singularity Problem of Output Tracking for a Class of Nonlinear System 2014 ,		1
91	Cart Velocity Tracking of General IPC Model Using ZG Control Compared with Cart Path Tracking 2014 ,		1
90	2013 ,		1

89	Predicting potential valley-point dates of stock market numerically based on ASF algorithm 2017 ,	1
88	From Euclid division of constant integers to Zhang division of time-varying variables 2017 ,	1
87	Type-Z0G1 controller using gradient descent of state vector for output tracking of time-invariant linear system 2017 ,	1
86	Northern American population data recovery from 1500AD to 1950AD as well as prediction using WASD neuronet with 513-year data 2015 ,	1
85	Use of WASD neuronet in projecting the population of Oceania based on 1000-year historical data 2015 ,	1
84	Inverse-free D1G1 solution to acceleration-level inverse kinematics of redundant robot manipulators 2014 ,	1
83	Different Zhang functions leading to different ZD models illustrated via time-varying square roots finding 2013 ,	1
82	Solving for time-varying inverse square root by different ZD models based on different Zhang functions 2013 ,	1
81	ZG Controllers of z2g0 and z2g1 Types for Tracking Control of IPC Mathematical Model. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2013 , 46, 689-694	1
80	On hyperbolic sine activation functions used in ZNN for time-varying matrix square roots finding 2012 ,	1
79	Zhang fractals yielded via solving nonlinear equations by discrete-time complex-valued ZD 2012 ,	1
78	Discrete-time ZNN algorithms for time-varying linear matrix-vector inequality solving 2012 ,	1
77	QP-based SMP scheme for robots with pseudoinverse method compared and singularities discussed 2012 ,	1
76	Joint-angle-drift remedy of three-link planar robot arm performing different types of end-effector trajectories 2009 ,	1
75	MATLAB Simulink modeling and simulation of Zhang neural networks for online time-varying sylvester equation solving 2008 ,	1
74	The link between newton iteration for matrix inversion and Zhang neural network (ZNN) 2008 ,	1
73	Inverse-free Dual Neural Networks for Online Solution of Strictly Convex Quadratic Programming 2007 ,	1
72	Recurrent Neural Networks for Nonlinear Output Regulation. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2001 , 34, 597-602	1

71	Pose control of constrained redundant arm using recurrent neural networks and one-iteration computing algorithm. <i>Applied Soft Computing Journal</i> , 2021 , 113, 108007	7.5	1
70	Different-Level Simultaneous Minimization with Aid of Ma Equivalence for Robotic Redundancy Resolution. <i>Lecture Notes in Computer Science</i> , 2014 , 431-438	0.9	1
69	Symbolic Solutions to Division by Zero Problem via Gradient Neurodynamics. <i>Lecture Notes in Computer Science</i> , 2017 , 745-750	0.9	1
68	Time-Varying Matrix Right Pseudoinverse 2015 , 121-128		1
67	Time-Varying Matrix Square Root 2015 , 129-148		1
66	Time-Varying Quadratic Programming by Zhang Neural Network Equipped with a Time-Varying Design Parameter $\lambda(t)$. <i>Lecture Notes in Computer Science</i> , 2011 , 101-108	0.9	1
65	Different-Level Schemes Equivalence for Self-Motion Planning of Robot Manipulators. <i>Lecture Notes in Computer Science</i> , 2012 , 9-16	0.9	1
64	Robotic RMP Schemes and QP Formulations 2013 , 17-25		1
63	Z-Type Model for Real-Time Solution of Complex ZLE. <i>Lecture Notes in Computer Science</i> , 2014 , 286-293	0.9	1
62	Relationship between time-instant number and precision of ZeaD formulas with proofs. <i>Numerical Algorithms</i> , 2021 , 88, 883-902	2.1	1
61	Jerk-level solutions to manipulator inverse kinematics with mathematical equivalence of operations discovered 2016 ,		1
60	UK population forecast using twice-pruning Chebyshev-Polynomial WASD neuronet 2016 ,		1
59	Inverse-free solution to inverse kinematics of two-wheeled mobile robot system using gradient dynamics method 2016 ,		1
58	New 5-Step Discrete-Time Zeroing Neuronet for Time-Dependent Matrix Square Root Finding 2019 ,		1
57	Zhang Neural Dynamics Approximated by Backward Difference Rules in Form of Time-Delay Differential Equation. <i>Neural Processing Letters</i> , 2019 , 50, 1735-1753	2.4	1
56	6-Step Discrete ZNN Model for Repetitive Motion Control of Redundant Manipulator. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2021 , 1-12	7.3	1
55	Jerk-Level Zhang Neurodynamics Equivalency of Bound Constraints, Equation Constraints, and Objective Indices for Cyclic Motion of Robot-Arm Systems. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , 2021 , PP,	10.3	1
54	Singularity-conquering Zhang-gradient controller groups for tracking control of Brockett integrator 2018 ,		1

53	Zhang Matrix Found as an Exception with its Time-Dependent Pseudoinverse Unsolvable by Getz-Masden Dynamic System 2018 ,		1
52	Any ZeaD Formula of Six Instants Having No Quartic or Higher Precision with Proof 2018 ,		1
51	Computer Simulations and Comparisons of Jerk-Level Cyclic Motion Planning and Control for CRRM 2018 ,		1
50	Discrete Model Solving Time-Dependent Matrix Eigen Problem with ZeaD (Zhang et al Discretization) Formula Using 7 Points 2018 ,		1
49	Real-domain QR decomposition models employing zeroing neural network and time-discretization formulas for time-varying matrices. <i>Neurocomputing</i> , 2021 , 448, 217-227	5.4	1
48	7-Instant Discrete-Time Synthesis Model Solving Future Different-Level Linear Matrix System via Equivalency of Zeroing Neural Network. <i>IEEE Transactions on Cybernetics</i> , 2021 , PP,	10.2	1
47	Modeling and Verification of Zhang Neural Networks for Online Solution of Time-Varying Quadratic Minimization and Programming. <i>Lecture Notes in Computer Science</i> , 2009 , 101-110	0.9	0
46	Zhang Fractals Yielded via Solving Time-Varying Nonlinear Complex Equations by Discrete-Time Complex-Valued ZD. <i>Lecture Notes in Computer Science</i> , 2012 , 596-603	0.9	0
45	Discrete-Time ZNN Algorithms for Time-Varying Quadratic Programming Subject to Time-Varying Equality Constraint. <i>Lecture Notes in Computer Science</i> , 2012 , 47-54	0.9	0
44	Robustness Analysis of Z-type ZLE Solving. <i>Lecture Notes in Computer Science</i> , 2013 , 62-69	0.9	0
43	New Models for Solving Time-Varying LU Decomposition by Using ZNN Method and ZeaD Formulas. <i>Journal of Mathematics</i> , 2021 , 2021, 1-13	1.2	0
42	Unified Solution of Different-Kind Future Matrix Equations Using New Nine-Instant Discretization Formula and Zeroing Neural Dynamics. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , 2021 , 1-11	7.3	0
41	Discrete-time future nonlinear neural optimization with equality constraint based on ten-instant ZTD formula. <i>Neurocomputing</i> , 2022 , 488, 444-456	5.4	0
40	Tracking Control for Triple-Integrator and Quintuple-Integrator Systems with Single Input Using Zhang Neural Network with Time Delay Caused by Backward Finite-Divided Difference Formulas for Multiple-Order Derivatives. <i>Mathematics</i> , 2022 , 10, 1440	2.3	0
39	Time-Varying Complex Matrix Inverse 2015 , 163-172		
38	Introduction, Concepts and Preliminaries 2021 , 1-12		
37	Pendulum Tracking Control of IPC System 2021 , 157-175		
36	GD-Aided IOL Tracking Control of AFN System 2021 , 179-194		

35 ZG Trajectory Generation of Van der Pol Oscillator **2021**, 195-206

34 PDBZ and TDBZ Problem Solving and Comparing **2021**, 229-245

33 ZG Output Tracking of TVL System with DBZ Handled **2021**, 249-256

32 ZG Stabilization of TVL System with PDBZ Shown **2021**, 257

31 ZG Output Tracking of TVL and TVN Systems **2021**, 271-280

30 ZG Tracking Control of a Class of Chaotic Systems **2021**, 15-36

29 ZG Synchronization of Lu and Chen Chaotic Systems **2021**, 37-47

28 ZG Tracking Control of Modified Lorenz Nonlinear System **2021**, 49

27 ZG Tracking Control of Brockett Integrator **2021**, 71-82

26 ZG Tracking Control and Simulation of DI System **2021**, 83-98

25 ZG Tracking Control of MI Systems **2021**, 99-120

24 ZD and ZG Control of Simple Pendulum System **2021**, 123-130

23 Cart Path Tracking Control of IPC System **2021**, 131-156

22 From Penrose Equations to Zhang Neural Network, GetzMarsden Dynamic System, and DDD (Direct Derivative Dynamics) Using Substitution Technique. *Discrete Dynamics in Nature and Society*, **2021**, 2021, 1-21 1.1

21 One-Dimensional Analysis of Exponential Convergence Condition for Dual Neural Network. *Lecture Notes in Computer Science*, **2007**, 137-147 0.9

20 Future Linear Matrix Equation of Generalized Sylvester Type Solved by Zeroing Neural Dynamics and 5-Instant ZeaD Formula. *Advances in Intelligent Systems and Computing*, **2020**, 260-270 0.4

19 Application to Fixed-Base Robot RMP **2015**, 195-213

18 Time-Varying Square Root **2015**, 33-45

- 17 Time-Varying Complex Reciprocal **2015**, 151-161
- 16 Inverse-Free Scheme of G1 Type to Velocity-Level Inverse Kinematics of Redundant Robot Manipulators. *Lecture Notes in Computer Science*, **2015**, 99-108 0.9
- 15 Application to Mobile Robot RMP **2015**, 215-236
- 14 Time-Varying Matrix Inverse **2015**, 91-104
- 13 Time-Varying Reciprocal **2015**, 3-16
- 12 Time-Varying Complex Matrix Generalized Inverse **2015**, 173-192
- 11 Time-Varying Matrix Left Pseudoinverse **2015**, 105-119
- 10 Time-Varying Inverse Square Root **2015**, 17-31
- 9 Time-Varying Linear Matrix-Vector Inequality **2015**, 75-88
- 8 Ten-Quarter Projection for Spanish Central Government Debt via WASD Neuronet. *Lecture Notes in Computer Science*, **2017**, 893-902 0.9
- 7 Dual Neural Network **2013**, 33-56
- 6 Proofs of Repetitive Motion Performance Index **2013**, 27-30
- 5 Examples of Planar Multilink Manipulators **2013**, 109-128
- 4 Physical Robot Manipulator Experiments **2013**, 149-166
- 3 PA10 Examples **2013**, 137-148
- 2 Predict Ages of Future USA Presidents via SARIMA-Combined Sinusoidal BiWASDNN. *Advances in Intelligent Systems and Computing*, **2021**, 1722-1733 0.4
- 1 Discrete-time ZNN-based noise-handling ten-instant algorithm solving Yang-Baxter-like matrix equation with disturbances. *Neurocomputing*, **2022**, 488, 391-401 5.4