Frank Hung Fat Leung

List of Publications by Year
in descending order

182 papers	3,679 citations	185998 28 h-index	155451 55 g-index
187 all docs	187 docs citations	187 times ranked	2425 citing authors

#	Article	IF	Citations
1	Joint Spine Segmentation and Noise Removal From Ultrasound Volume Projection Images With Selective Feature Sharing. IEEE Transactions on Medical Imaging, 2022, 41, 1610-1624.	5.4	9
2	Ultrasound spine image segmentation using multi-scale feature fusion Skip-Inception U-Net (SIU-Net). Biocybernetics and Biomedical Engineering, 2022, 42, 341-361.	3.3	14
3	Vector-Based Feature Representations for Speech Signals: From Supervector to Latent Vector. IEEE Transactions on Multimedia, 2021, 23, 2641-2655.	5.2	0
4	Dual-task ultrasound spine transverse vertebrae segmentation network with contour regularization. Computerized Medical Imaging and Graphics, 2021, 89, 101896.	3.5	11
5	DA-GAN: Learning Structured Noise Removal In Ultrasound Volume Projection Imaging For Enhanced Spine Segmentation. , 2021, , .		3
6	Structure-Enhanced Attentive Learning For Spine Segmentation From Ultrasound Volume Projection Images. , 2021, , .		3
7	Investigating and improving the utility of probabilistic linear discriminant analysis for acoustic signal classification. , 2021, 114, 103055.		1
8	Light-Convolution Dense Selection U-Net (LDS U-Net) for Ultrasound Lateral Bony Feature Segmentation. Applied Sciences (Switzerland), 2021, 11, 10180.	1.3	11
9	Bone Feature Segmentation in Ultrasound Spine Image with Robustness to Speckle and Regular Occlusion Noise. , 2020, , .		9
10	Source Microphone Recognition Aided by a Kernel-Based Projection Method. IEEE Transactions on Information Forensics and Security, 2019, 14, 2875-2886.	4.5	18
11	Comparison of Supervector and Majority Voting in Acoustic Scene Identification. , 2018, , .		2
12	A Class-dependent Background Model for Speech Signal Feature Extraction. , 2018, , .		1
13	Gaussian Mixture Model and Gaussian Supervector for Image Classification. , 2018, , .		4
14	The Scalable Version of Probabilistic Linear Discriminant Analysis and Its Potential as A Classifier for Audio Signal Classification. , 2018, , .		5
15	Discriminative Collaborative Representation and Its Application to Audio Signal Classification. , 2018, , .		2
16	Fisher Discriminant Analysis with New Between-class Scatter Matrix for Audio Signal Classification. , 2018, , .		0
17	Using Double Regularization to Improve the Effectiveness and Robustness of Fisher Discriminant Analysis as A Projection Technique. , 2018, , .		3
18	Generalized Fisher Discriminant Analysis as A Dimensionality Reduction Technique. , 2018, , .		5

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19	A hybrid evolutionary preprocessing method for imbalanced datasets. Information Sciences, 2018, 454-455, 161-177.	4.0	42
20	A local variance based approach to alleviate the scene content interference for source camera identification. Digital Investigation, 2017, 22, 74-87.	3.2	6
21	Using regularized fisher discriminant analysis to improve the performance of Gaussian supervector in session and device identification. , 2017, , .		6
22	Mobile phone identification from speech recordings using Weighted Support Vector Machine. , 2016, , .		7
23	Identification of protein-ligand binding site using multi-clustering and Support Vector Machine. , 2016, , .		4
24	Quality and robustness improvement for real world industrial systems using a fuzzy particle swarm optimization. Engineering Applications of Artificial Intelligence, 2016, 47, 68-80.	4.3	27
25	Weighting optimization with neural network for photo-response-non-uniformity-based source camera identification. , 2014, , .		1
26	Differential Evolution with adaptive population size. , 2014, , .		2
27	An under-sampling method based on fuzzy logic for large imbalanced dataset. , 2014, , .		2
28	An intelligent swarm based-wavelet neural network for affective mobile phone design. Neurocomputing, 2014, 142, 30-38.	3.5	10
29	Hypoglycaemia detection using fuzzy inference system with intelligent optimiser. Applied Soft Computing Journal, 2014, 20, 54-65.	4.1	9
30	Hypoglycaemia detection using fuzzy inference system with multi-objective double wavelet mutation Differential Evolution. Applied Soft Computing Journal, 2013, 13, 2803-2811.	4.1	9
31	Predicting Protein-Ligand Binding Site Using Support Vector Machine with Protein Properties. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2013, 10, 1517-1529.	1.9	15
32	A novel evolutionary preprocessing method based on over-sampling and under-sampling for imbalanced datasets. , 2013, , .		14
33	An immunology-inspired multi-engine anomaly detection system with hybrid particle swarm optimisations. , 2012, , .		0
34	Intelligent fuzzy particle swarm optimization with cross-mutated operation. , 2012, , .		9
35	NON-INVASIVE NOCTURNAL HYPOGLYCEMIA DETECTION FOR INSULIN-DEPENDENT DIABETES MELLITUS USING GENETIC FUZZY LOGIC METHOD. International Journal of Computational Intelligence and Applications, 2012, 11, 1250025.	0.6	1
36	Restoration of Half-toned Color-quantized Images Using Particle Swarm Optimization with Multi-wavelet Mutation. , 2012, , 39-57.		1

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37	Predicting protein-ligand binding site with differential evolution and support vector machine. , 2012, , .		1
38	An Improved Differential Evolution and Its Industrial Application. Journal of Intelligent Learning Systems and Applications, 2012, 04, 81-97.	0.4	2
39	Economic load dispatch using intelligent optimization with fuzzy control. , 2011, , .		3
40	Hypoglycemia detection using fuzzy inference system with genetic algorithm. , 2011, , .		3
41	An adaptive differential evolution with unsymmetrical mutation. , 2011, , .		1
42	Economic Load Dispatch using Differential Evolution with double wavelet mutation operations. , 2010, , .		9
43	Stability analysis and stabilization of polynomial fuzzy-model-based control systems using piecewise linear membership functions. , 2010, , .		3
44	A New Differential Evolution with self-terminating ability using fuzzy control and k-nearest neighbors. , 2010, , .		0
45	Predicting protein-ligand binding site with support vector machine. , 2010, , .		1
46	An integrated approach of particle swarm optimization and support vector machine for gene signature selection and cancer prediction. , 2009, , .		5
47	A new Differential Evolution with wavelet theory based mutation operation. , 2009, , .		7
48	Relaxed stability conditions for discrete-time fuzzy-model-based control systems. , 2009, , .		0
49	Stability analysis of discrete-time fuzzy-model-based control systems with time delay: Time delay-independent approach. Fuzzy Sets and Systems, 2008, 159, 990-1000.	1.6	51
50	Hybrid Particle Swarm Optimization With Wavelet Mutation and Its Industrial Applications. IEEE Transactions on Systems, Man, and Cybernetics, 2008, 38, 743-763.	5.5	218
51	Stability analysis of T-S fuzzy-model-based control systems using fuzzy Lyapunov function. , 2008, , .		10
52	Improved Hybrid Particle Swarm Optimized Wavelet Neural Network for Modeling the Development of Fluid Dispensing for Electronic Packaging. IEEE Transactions on Industrial Electronics, 2008, 55, 3447-3460.	5.2	155
53	Modelling the development of fluid dispensing for electronic packaging: Hybrid Particle Swarm Optimization based-wavelet neural network approach. , 2008, , .		0
54	Restoration of half-toned color-quantized images using Particle Swarm Optimization with wavelet mutation. , 2008, , .		8

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55	AN IMPROVED GENETIC-ALGORITHM-BASED NEURAL-TUNED NEURAL NETWORK. International Journal of Computational Intelligence and Applications, 2008, 07, 469-492.	0.6	1
56	SYNCHRONIZATION OF UNCERTAIN CHAOTIC SYSTEMS BASED ON FUZZY-MODEL-BASED APPROACH. World Scientific Series on Nonlinear Science, Series A, 2008, , 35-53.	0.0	2
57	STABILIZATION OF CHAOTIC SYSTEMS USING LINEAR SAMPLED-DATA CONTROLLER. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2007, 17, 2021-2031.	0.7	31
58	Stability Analysis and Performance Deign for Fuzzy-Model-Based Control System under Imperfect Premise Matching. IEEE International Conference on Fuzzy Systems, 2007, , .	0.0	3
59	Stability Conditions for Fuzzy Control Systems with Fuzzy Feedback Gains. IEEE International Conference on Fuzzy Systems, 2007, , .	0.0	1
60	Sampled-Data Fuzzy Controller for Time-Delay Nonlinear Systems: Fuzzy-Model-Based LMI Approach. IEEE Transactions on Systems, Man, and Cybernetics, 2007, 37, 617-629.	5.5	136
61	LMI-Based Stability and Performance Conditions for Continuous-Time Nonlinear Systems in Takagiâ€"Sugeno's Form. IEEE Transactions on Systems, Man, and Cybernetics, 2007, 37, 1396-1406.	5.5	84
62	A new hybrid Particle Swarm Optimization with wavelet theory based mutation operation. , 2007, , .		30
63	Control of nonlinear systems with a linear state-feedback controller and a modified neural network tuned by genetic algorithm. , 2007, , .		0
64	Design and Training for Combinational Neural-Logic Systems. IEEE Transactions on Industrial Electronics, 2007, 54, 612-619.	5.2	20
65	Fuzzy controller with stability and performance rules for nonlinear systems. Fuzzy Sets and Systems, 2007, 158, 147-163.	1.6	43
66	An Improved Genetic Algorithm with Average-bound Crossover and Wavelet Mutation Operations. Soft Computing, 2007, 11, 7-31.	2.1	95
67	Input-dependent neural network trained by real-coded genetic algorithm and its industrial applications. Soft Computing, 2007, 11, 1033-1052.	2.1	10
68	Application of a modified neural fuzzy network and an improved genetic algorithm to speech recognition. Neural Computing and Applications, 2007, 16, 419-431.	3.2	20
69	Editorial for ICONIP 2006. Neural Computing and Applications, 2007, 16, 503-504.	3.2	0
70	A Variable Node-to-Node-Link Neural Network and Its Application to Hand-Written Recognition. , 2006, , .		0
71	Design and Stabilization of Sampled-Data Neural-Network-Based Control Systems. IEEE Transactions on Systems, Man, and Cybernetics, 2006, 36, 995-1005.	5.5	51
72	LMI-based Stability and Performance Design of Fuzzy Control Systems: Fuzzy Models and Controllers with Different Premises. , 2006, , .		22

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73	LMI-based Stability and Performance Conditions for Continuous-time Nonlinear Systems in Takagi-Sugeno's Form. , 2006, , .		1
74	LMI Relaxed Stability Conditions for Fuzzy-Model-based Control Systems. , 2006, , .		1
75	SYNCHRONIZATION OF UNCERTAIN CHAOTIC SYSTEMS BASED ON THE FUZZY-MODEL-BASED APPROACH. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2006, 16, 1435-1444.	0.7	19
76	Fuzzy rule-based combination of linear and switching state-feedback controllers. Fuzzy Sets and Systems, 2005, 156, 153-184.	1.6	22
77	COMPUTATIONAL INTELLIGENCE TECHNIQUES FOR HOME ELECTRIC LOAD FORECASTING AND BALANCING. International Journal of Computational Intelligence and Applications, 2005, 05, 371-391.	0.6	5
78	AN IMPROVED GENETIC ALGORITHM BASED FUZZY-TUNED NEURAL NETWORK. International Journal of Neural Systems, 2005, 15, 457-474.	3.2	5
79	Fuzzy Combination of Fuzzy and Switching State-Feedback Controllers for Nonlinear Systems Subject to Parameter Uncertainties. IEEE Transactions on Systems, Man, and Cybernetics, 2005, 35, 269-281.	5.5	15
80	Stability Analysis of Fuzzy Control Systems Subject to Uncertain Grades of Membership. IEEE Transactions on Systems, Man, and Cybernetics, 2005, 35, 1322-1325.	5.5	153
81	Fuzzy combination of linear state-feedback and switching controllers. Electronics Letters, 2004, 40, 410.	0.5	3
82	Function estimation using a neural-fuzzy network and an improved genetic algorithm. International Journal of Approximate Reasoning, 2004, 36, 243-260.	1.9	5
83	Optimal and Stable Fuzzy Controllers for Nonlinear Systems Based on an Improved Genetic Algorithm. IEEE Transactions on Industrial Electronics, 2004, 51, 172-182.	5.2	42
84	On Interpretation of Graffiti Digits and Characters for eBooks: Neural-Fuzzy Network and Genetic Algorithm Approach. IEEE Transactions on Industrial Electronics, 2004, 51, 464-471.	5.2	21
85	Design of a Switching Controller for Nonlinear Systems With Unknown Parameters Based on a Fuzzy Logic Approach. IEEE Transactions on Systems, Man, and Cybernetics, 2004, 34, 1068-1074.	5.5	34
86	Digit and Command Interpretation for Electronic Book Using Neural Network and Genetic Algorithm. IEEE Transactions on Systems, Man, and Cybernetics, 2004, 34, 2273-2283.	5.5	12
87	A novel genetic-algorithm-based neural network for short-term load forecasting. IEEE Transactions on Industrial Electronics, 2003, 50, 793-799.	5.2	102
88	Short-term electric load forecasting based on a neural fuzzy network. IEEE Transactions on Industrial Electronics, 2003, 50, 1305-1316.	5.2	77
89	Design and stability analysis of fuzzy model-based nonlinear controller for nonlinear systems using genetic algorithm. IEEE Transactions on Systems, Man, and Cybernetics, 2003, 33, 250-257.	5.5	58
90	Tuning of the structure and parameters of a neural network using an improved genetic algorithm. IEEE Transactions on Neural Networks, 2003, 14, 79-88.	4.8	639

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91	A practical fuzzy logic controller for the path tracking of wheeled mobile robots. IEEE Control Systems, 2003, 23, 60-65.	1.0	59
92	A linear matrix inequality approach for the control of uncertain fuzzy systems. IEEE Control Systems, 2002, 22, 20-25.	1.0	14
93	Analogue implementation of a neural network controller for UPS inverter applications. IEEE Transactions on Power Electronics, 2002, 17, 305-313.	5.4	38
94	A switching controller for uncertain nonlinear systems. IEEE Control Systems, 2002, 22, 7-14.	1.0	45
95	Design of fuzzy logic controllers for Takagiâ€"Sugeno fuzzy model based system with guaranteed performance. International Journal of Approximate Reasoning, 2002, 30, 41-55.	1.9	16
96	A fuzzy sliding controller for nonlinear systems. IEEE Transactions on Industrial Electronics, 2001, 48, 32-37.	5.2	103
97	Nonlinear state feedback controller for nonlinear systems: Stability analysis and design based on fuzzy plant model. IEEE Transactions on Fuzzy Systems, 2001, 9, 657-661.	6.5	66
98	Fuzzy control of a class of multivariable nonlinear systems subject to parameter uncertainties: model reference approach. International Journal of Approximate Reasoning, 2001, 26, 129-144.	1.9	33
99	Improved stability analysis method for fuzzy logic control systems. Electronics Letters, 2000, 36, 1085.	0.5	14
100	Stable and robust fuzzy control for uncertain nonlinear systems. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2000, 30, 825-840.	3.4	88
101	Control of PWM inverter using a discrete-time sliding mode controller. , 1999, , .		9
102	Fast simulation of PWM inverters using MATLAB. , 1999, , .		3
103	Neural-network-controlled single-phase UPS inverters with improved transient response and adaptability to various loads. , 1999, , .		1
104	A chattering elimination algorithm for sliding mode control of uncertain non-linear systems. Mechatronics, 1998, 8, 765-775.	2.0	29
105	Design of fuzzy controllers for uncertain nonlinear systems using stability and robustness analyses. Systems and Control Letters, 1998, 35, 237-243.	1.3	31
106	Lyapunov-function-based design of fuzzy logic controllers and its application on combining controllers. IEEE Transactions on Industrial Electronics, 1998, 45, 502-509.	5.2	71
107	REALIZATION OF ANALOG FUZZY LOGIC CONTROL FOR PWM BOOST CONVERTERS. Journal of Circuits, Systems and Computers, 1998, 08, 411-419.	1.0	4
108	A simple large-signal nonlinear modeling approach for fast simulation of zero-current-switch quasi-resonant converters. IEEE Transactions on Power Electronics, 1997, 12, 437-442.	5.4	21

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109	Fuzzy model based controller for an inverted pendulum. Electronics Letters, 1996, 32, 1683.	0.5	29
110	A SIMPLE LARGE-SIGNAL NONLINEAR MODEL FOR ZERO-CURRENT-SWITCH QUASI-RESONANT BUCK CONVERTERS. Journal of Circuits, Systems and Computers, 1996, 06, 593-598.	1.0	0
111	Algorithm for eliminating chattering in sliding mode control. Electronics Letters, 1996, 32, 599.	0.5	5
112	An improved LQR-based controller for switching DC-DC converters. IEEE Transactions on Industrial Electronics, 1993, 40, 521-528.	5.2	79
113	The control of switching DC-DC converters-a general LWR problem. IEEE Transactions on Industrial Electronics, 1991, 38, 65-71.	5.2	84
114	On fuzzy control of nonlinear systems with large parameter uncertainties: fuzzy scheduler approach. , 0, , .		3
115	Real-coded genetic algorithm with average-bound crossover and wavelet mutation for network parameters learning. , 0, , .		4
116	Lyapunov function based design of robust fuzzy controllers for uncertain nonlinear systems: distinct Lyapunov functions. , 0, , .		2
117	Stability and robustness analysis of uncertain multivariable fuzzy digital control systems. , 0, , .		1
118	The Control of Switching dc-dc Converters. , 0, , .		0
119	The Design Of Robust State-estimators. , 0, , .		1
120	A neuro-fuzzy controller applying to a Cuk converter. , 0, , .		2
121	A simple large-signal nonlinear model for fast simulation of zero-current-switch quasi-resonant converters. , 0, , .		0
122	A simple adaptive control strategy for regulated switching DC-DC converter based on grid-point concept. , 0, , .		5
123	On the design of stable fuzzy controller based on adaptive approach. , 0, , .		0
124	A chattering elimination algorithm for sliding mode control. , 0, , .		2
125	The design of stable fuzzy logic controllers with combination of conventional controllers. , 0, , .		9
126	Stable and robust fuzzy control for uncertain nonlinear systems based on a grid-point approach. , 0, , .		9

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127	A simple gain scheduled PID controller with stability consideration based on a grid-point concept. , 0, , .		5
128	Design of stable and robust fuzzy controller for uncertain nonlinear systems: Lyapunov's function approach. , 0, , .		2
129	Stable and robust fuzzy controller for uncertain nonlinear systems based on a multiple-grid-point approach. , 0, , .		3
130	Adaptive control of switching DC-DC converters based on a grid point approach: design and implementation. , 0, , .		1
131	On design of stable and robust fuzzy observer-controller for uncertain nonlinear systems based on a grid-point approach. , 0, , .		2
132	Stability design of TS model based fuzzy systems. , 0, , .		25
133	On fuzzy model reference adaptive control systems: full-state feedback and output feedback. , 0, , .		1
134	Lyapunov function based design of heuristic fuzzy logic controllers. , 0, , .		14
135	Combination of sliding mode controller and PI controller using fuzzy logic controller. , 0, , .		19
136	Adaptive control of multivariable fuzzy systems with unknown parameters. , 0, , .		1
137	On design of switching controllers for uncertain multivariable nonlinear systems based on a fuzzy logic approach. , 0, , .		0
138	Stability analysis of systems with parameter uncertainties under fuzzy logic control. , 0, , .		0
139	An improved stable and robust fuzzy controller for uncertain multivariable nonlinear systems. , 0, , .		0
140	Fuzzy control of multivariable nonlinear systems subject to parameter uncertainties: model reference approach. , 0, , .		0
141	An improved Lyapunov function based stability analysis method for fuzzy logic control systems. , 0, , .		12
142	Fuzzy state feedback controller for nonlinear systems: stability analysis and design. , 0, , .		4
143	Stability and robustness analysis and gain design for fuzzy control systems subject to parameter uncertainties. , 0, , .		2
144	Switching controller for fuzzy systems subject to unknown parameters: analysis and design based on a linear matrix inequality (LMI) approach. , 0, , .		1

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145	Decision maker for robot soccer. , 0, , .		3
146	Fuzzy control of DC-DC switching converters: stability and robustness analysis/sup 1/. , 0, , .		18
147	On design of a switching controller for nonlinear systems with unknown parameters based on a model reference approach. , 0, , .		1
148	A neural fuzzy network with optimal number of rules for short-term load forecasting in an intelligent home. , 0, , .		4
149	On interpretation of graffiti commands for eBooks using a neural network and an improved genetic algorithm. , 0, , .		7
150	Stability analysis and design of fuzzy observer-controller for fuzzy systems. , 0, , .		1
151	Optimal and stable fuzzy controllers for nonlinear systems subject to parameter uncertainties using genetic algorithm. , 0, , .		4
152	Linear controllers for fuzzy systems subject to unknown parameters: stability analysis and design based on linear matrix inequality (LMI) approach. , 0, , .		2
153	Tuning of the structure and parameters of neural network using an improved genetic algorithm. , 0, , .		32
154	Daily load forecasting with a fuzzy-input-neural network in an intelligent home. , 0, , .		2
155	A fast path planning-and-tracking control for wheeled mobile robots. , 0, , .		9
156	A practical fuzzy logic controller for the path tracking of wheeled mobile robots. , 0, , .		4
157	A path planning method for microrobot soccer game. , 0, , .		0
158	Fuzzy model reference control of wheeled mobile robots. , 0, , .		10
159	Learning of neural network parameters using a fuzzy genetic algorithm. , 0, , .		6
160	Stability analysis of systems with nonsymmetric dead zone under fuzzy logic control. , 0, , .		0
161	Graffiti commands interpretation for eBooks using a self-structured neural network and genetic algorithm. , 0, , .		1
162	On interpretation of graffiti digits and commands for eBooks: neural fuzzy network and genetic algorithm approach. , 0, , .		7

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163	Gain estimation for an AC power line data network transmitter using a self-structured neural network and genetic algorithm. , 0, , .		0
164	Short-term daily load forecasting in an intelligent home with GA-based neural network. , 0, , .		4
165	A novel GA-based neural network for short-term load forecasting. , 0, , .		16
166	Playing tic-tac-toe using a modified neural network and an improved genetic algorithm. , 0, , .		0
167	Design and stability analysis of fuzzy model based nonlinear controller for nonlinear systems using genetic algorithm. , 0, , .		3
168	Improved genetic algorithm for economic load dispatch with valve-point loadings. , 0, , .		22
169	A genetic algorithm based neural-tuned neural network. , 0, , .		3
170	A genetic algorithm based variable structure Neural Network. , 0, , .		3
171	Recognition of speech commands using a modified neural fuzzy network and an improved GA. , 0, , .		4
172	A genetic algorithm based fuzzy-tuned neural network. , 0, , .		6
173	Stable fuzzy controller design for uncertain nonlinear systems: genetic algorithm approach. , 0, , .		1
174	Gain estimation for an AC power line data network transmitter using a neural-fuzzy network and an improved genetic algorithm. , 0, , .		0
175	Neural fuzzy network and genetic algorithm approach for Cantonese speech command recognition. , 0, , .		5
176	Stability analysis, synthesis and optimization of radial-basis-function neural-network based controller for nonlinear systems. , 0, , .		2
177	Genetic algorithm based variable-structure neural network and its industrial application. , 0, , .		0
178	Design and stabilization of sampled-data neural-network-based control systems. , 0, , .		2
179	Genetic algorithm-based variable translation wavelet neural network and its application. , 0, , .		10
180	A variable-parameter neural network trained by improved genetic algorithm and its application. , 0, , .		2

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181	A Variable Node-to-Node-Link Neural Network and Its Application to Hand-Written Recognition. , 0, , .		0
182	An Improved GA Based Modified Dynamic Neural Network for Cantonese-Digit Speech Recognition. , 0, , .		2