

WANG Zhaoxia

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Education

PhD, Nankai University, China, 2004

Master of Engineering, Nankai University, China, 2001

Bachelor of Engineering, East China University of Science & Technology, China, 1993

Skill Set

Natural Language Processing and Natural Language Understanding, Machine Learning, Inference in Vision and Cognition, Data Mining, Intelligent Robots, Social Media Analysis, ...

Academic Appointments

Associate Professor of Computer Science (Practice), School of Computing and Information Systems, SMU, Apr 2021 - Present

Associate Professor of Information Systems (Practice), School of Computing and Information Systems, SMU, Jul 2019 - Mar 2021

RESEARCH

Research and Project Areas

Natural Language Processing (NLP) and Natural Language Understanding (NLU)
 Machine Learning
 Data Analytics
 Image Processing
 Deep Language Understanding and Intelligent Robots
 Causal Reasoning and Language Understanding
 Text Mining
 Fine-grained Sentiment and Emotion Analysis
 Social Computing
 Social Media Content Mining and Analysis
 Safety and Risk Analysis
 Artificial Intelligence (AI) & Computational Intelligence (CI) and Their Applications

Publications

Journal Articles [Refereed]

A Review of Chinese Sentiment Analysis: Subjects, Methods, and Trends, by Zhaoxia WANG; Donghao HUANG; Jingfeng CUI; Xinyue ZHANG; Seng-Beng HO; Erik CAMBRIA. (2024). *Artificial Intelligence Review*, (Accepted)

Joint weakly supervised image emotion analysis based on interclass discrimination and intraclass correlation, by ZHANG, Xinyue; WANG, Zhaoxia; CAO, Guitao; HO, Seng-Beng. (2024). *IEEE Intelligent Systems*, 39 (5), 82-89. <https://doi.org/10.1109/MIS.2024.3441408> (Published)

Machine learning for refining knowledge graphs: A survey, by SUBAGDJA, Budhitama; Shanthoshigaa, D.; WANG, Zhaoxia; TAN, Ah-Hwee. (2024). *ACM Computing Surveys*, 56 (6), 1-38. <https://doi.org/10.1145/3640313> (Published)

Survey on sentiment analysis: Evolution of research methods and topics, by CUI, Jingfeng; WANG, Zhaoxia; HO, Seng-Beng; CAMBRIA, Erik. (2023). *Artificial Intelligence Review*, 56 (8), 8469-8510. <https://doi.org/10.1007/s10462-022-10386-z> (Published)

Learning-based stock trending prediction by incorporating technical indicators and social media sentiment, by WANG, Zhaoxia; HU, Zhenda; LI, Fang; HO, Seng-Beng; CAMBRIA, Erik. (2023). *Cognitive Computation*, 15 (3), 1092-1102. <https://doi.org/10.1007/s12559-023-10125-8> (Published)

MSRL-Net: A Multi-level Semantic Relation-enhanced Learning Network for aspect-based sentiment analysis, by HU, Zhenda; WANG, Zhaoxia; WANG, Yinglin; TAN, Ah-Hwee. (2023). *Expert Systems with Applications*, 217 1-10. <https://doi.org/10.1016/j.eswa.2022.119492> (Published)

MiMuSA-mimicking human language understanding for fine-grained multi-class sentiment analysis, by WANG, Zhaoxia; HU, Zhenda; HO, Seng-Beng; CAMBRIA, Erik; TAN, Ah-Hwee. (2023). *Neural Computing and Applications*, 35 (21), 15907-15921. <https://doi.org/10.1007/s00521-023-08576-z> (Published)

Seven pillars for the future of Artificial Intelligence, by CAMBRIA, Erik; MAO, Rui; CHEN, Melvin; WANG, Zhaoxia; HO, Seng-Beng. (2023). *IEEE Intelligent Systems*, 38 (6), 62-69. (Published)

Aspect sentiment triplet extraction incorporating syntactic constituency parsing tree and commonsense knowledge graph, by HU, Zhenda; WANG, Zhaoxia; WANG, Yinglin; TAN, Ah-Hwee. (2023). *Cognitive Computation*, 15 (1), 337-347. <https://doi.org/10.1007/s12559-022-10078-4> (Published)

Boundary precedence image inpainting method based on Self-organizing Maps, by PEN, Haibo; WANG, Quan; WANG, Zhaoxia. (2021). *Knowledge-Based Systems*, 216 1-9. (Published)

- Automatic identification and inpainting of cracks in mural images based on improved SOM, by YANG, Ting; WANG, Shuangshuan; PEN, Haibo; WANG, Zhaoxia. (2020). *Journal of Tianjin University Science and Technology*, 53 (9), 932-938. <https://doi.org/10.11784/tdxbz201907054> (Published)
- Multi-Level Fine-Scaled Sentiment Sensing with Ambivalence Handling, by WANG, Zhaoxia; HO, Seng-Beng; CAMBRIA, Erik. (2020). *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, 28 (4), 683-697. <https://doi.org/10.1142/S0218488520500294> (Published)
- A review of emotion sensing: categorization models and algorithms, by WANG, Zhaoxia; HO, Seng-Beng; CAMBRIA, Erik. (2020). *Multimedia Tools and Applications*, 79 (47-48), 35553-35582. <https://doi.org/10.1007/s11042-019-08328-z> (Published)
- Structure-Priority Image Restoration Through Genetic Algorithm Optimization, by WANG, Zhaoxia; PEN, Haibo; YANG, Ting; WANG, Quan. (2020). *IEEE Access*, 8 90698-90708. <https://doi.org/10.1109/ACCESS.2020.2994127> (Published)
- Optimal Feature Selection for Learning-Based Algorithms for Sentiment Classification, by WANG, Zhaoxia, LIN, Zhiping. (2020). *Cognitive Computation*, 12 (1), 238-248. <https://doi.org/10.1007/s12559-019-09669-5> (Published)
- Analysis of Bus Ride Comfort Using Smartphone Sensor Data, by CHIN, Hoong-Chor; PANG, Xingting; WANG, Zhaoxia. (2019). *Computers, Materials & Continua*, 60 (2), 455-463. <https://doi.org/10.32604/cmc.2019.05664> (Published)
- Data center holistic demand response algorithm to smooth microgrid tie-line power fluctuation, by YANG, Ting; ZHAO, Yingjie; PEN, Haibo; WANG, Zhaoxia. (2018). *Applied Energy*, 231 277-287. <https://doi.org/10.1016/j.apenergy.2018.09.093> (Published)
- Secondary Frequency Stochastic Optimal Control in Independent Microgrids with Virtual Synchronous Generator-Controlled Energy Storage Systems, by YANG, Ting; ZHANG, Yajian; WANG, Zhaoxia; PEN, Haibo. (2018). *Energies*, 11 (9), 1-14. <https://doi.org/10.3390/en11092388> (Published)
- Harmonic analysis in integrated energy system based on compressed sensing, by YANG, Ting; PEN, Haibo; WANG, Dan; WANG, Zhaoxia. (2016). *Applied Energy*, 165 583-591. <https://doi.org/10.1016/j.apenergy.2015.12.058> (Published)
- Feature Knowledge Based Fault Detection of Induction Motors Through the Analysis of Stator Current Data, by YANG, Ting; PEN, Haibo; WANG, Zhaoxia; CHANG, Che Sau. (2016). *IEEE Transactions on Instrumentation and Measurement*, 65 (3), 549-558. <https://doi.org/10.1109/TIM.2015.2498978> (Published)
- Hierarchical Fuzzy Logic System for Implementing Maintenance Schedules of Offshore Power Systems, by CHANG, C. S.; WANG, Zhaoxia; YANG, Fan; TAN, W. W.. (2012). *IEEE Transactions on Smart Grid*, 3 (1), 3-11. <https://doi.org/10.1109/TSG.2011.2173358> (Published)
- Image inpainting method based on evolutionary algorithm, by WANG, Zhaoxia; WANG, Quan; CHANG, C. S.; BAI, Ming; SUN, Zhen; YANG, Ting. (2011). *International Journal of Digital Content Technology and its Applications*, 5 (4), 187-193. <https://doi.org/10.4156/jdcta.vol5.issue4.16> (Published)
- Application of fast independent component analysis in fault detection of induction motors, by Xu, W.; Hao, F. F.; Hao, Q.; Li, N. N.; Yang, T.; WANG, Zhaoxia. (2009). *Journal of Tianjin Polytechnic University*, 28 (4), 64-67. (Published)
- Describing fuzzy sets using a new concept: Fuzzify functor, by WEI, Kexin; WANG, Zhaoxia; WANG, Quan. (2009). *Optoelectronics Letters*, 5 (1), 69-72. <https://doi.org/10.1007/s11801-009-8132-9> (Published)
- Determining the number of BP neural network hidden layer units, by SHEN, Huayu; WANG, Zhaoxia; GAO, Chengyao; QIN, Juan; YAO, Fubin; XU, Wei. (2008). *Journal of Tianjin University of Technology*, 24 (5), 13-15. (Published)
- Three dimensional image reconstruction for time-resolved diffuse optical tomography, by Zhao, H. J.; WANG, Zhaoxia; Jiang, Y. T.; Gao, F.; Tanikawa, Y.; Yamada, Y.. (2008). *Guangzi Xuebao / Acta Photonica Sinica*, 37 (8), 1580-1584. (Published)
- Quality of service routing strategy using supervised genetic algorithm, by WANG, Zhaoxia; SUN, Yugeng; WANG, Zhiyong; SHEN, Huayu. (2007). *Journal of Tianjin Polytechnic University*, 13 (1), 48-52. (Published)

Research on predicting network traffic using neural networks, by WANG, Zhaoxia; SUN, Yugeng; WANG, Zhiyong; Hao, T.; Sun, X.; Qin, J.; SHEN, Huayu. (2006). *Guangdianzi Jiguang / Journal of Optoelectronics Laser*, 17(10), 1255-1258. (Published)

Study of predicting combined chaotic time series using neural networks, by WANG, Zhaoxia; Chen, Z.Q.; Yuan, Z.Z.; Hao, T.Z.; Yang, B.H.. (2004). *Guangdianzi Jiguang / Journal of Optoelectronics Laser*, 15(10), 1225-1228. (Published)

QoS routing optimization strategy using genetic algorithm in optical fiber communication networks, by WANG, Zhaoxia; CHEN, Zengqiang; YUAN, Zhuzhi. (2004). *Journal of Computer Science and Technology*, 19(2), 213-217. <https://doi.org/10.1007/BF02944799> (Published)

Study for secure communications based on combined discrete chaotic systems, by WANG, Zhaoxia; Chen, Z.; Yuan, Z.; Hao, T.; Yang, B.. (2002). *Guangdianzi Jiguang / Journal of Optoelectronics Laser*, 13(12), 1241-1246. (Published)

Journal Articles [Non-Refereed]

Understanding natural disasters as risks in supply chain management through web data analysis, by ONG, Jimmy; WANG, Zhaoxia; GOH, Rick Siow Mong; YIN, Xiao Feng; XIN, Xin; FU, Xiuju. (2015). *International Journal of Computer and Communication Engineering*, 4(2), 126-133. <https://doi.org/10.17706/ijcce.2015.v4.391> (Published)

Editorials

Ubiquitous Data-Centric Sensor Networks, by YANG, Ting; WOO, Peng Yung; WANG, Zhaoxia; TAHERI, Javid; CHIN, Hoong Chor; HU, Guaqiang. (2014). *International Journal of Distributed Sensor Networks*, 2014 1-3. <https://doi.org/10.1155/2014/459768> (Published)

Conference Proceedings

Converting vocal performances into sheet music leveraging large language models, by JIANG, Jinjing; TEO, Nicole; PEN, Haibo; HO, Seng-Beng; WANG, Zhaoxia. (2024.0). *Proceedings of the IEEE International Conference on Data Mining*, Piscataway, New Jersey, USA: IEEE. <https://doi.org/ICDMW65004.2024.00063> (Forthcoming)

CausVSR: Causality inspired visual sentiment recognition, by ZHANG, Xinyue; WANG, Zhaoxia; WANG, Hailing; XIANG, Jing; WU, Chunwei; CAO, Guitao. (2024.0). *Proceedings of the 33rd International Joint Conference on Artificial Intelligence (IJCAI-24)*, Jeju, Korea, 2024 August 3-9, (pp. 1-9) California: IJCAI. (Accepted)

Comparative analysis of hate speech detection: Traditional vs. deep learning approaches, by PEN, Haibo; TEO, Nicole; WANG, Zhaoxia. (2024.0). *2024 IEEE Conference on Artificial Intelligence (CAI), Singapore, June 25-27: Proceedings*, (pp. 332-337) Piscataway, NJ: IEEE. <https://doi.org/10.1109/CAI59869.2024.00070> (Published)

Performance analysis of Llama 2 among other LLMs, by HUANG, Donghao; HU, Zhenda; WANG, Zhaoxia. (2024.0). *2024 IEEE Conference on Artificial Intelligence (CAI), Singapore, June 25-27: Proceedings*, (pp. 1081-1085) Piscataway, NJ: IEEE. <https://doi.org/10.1109/CAI59869.2024.00108> (Published)

Evaluation of Orca 2 against other LLMs for Retrieval Augmented Generation, by HUANG, Donghao; WANG, Zhaoxia. (2024.0). *Trends and Applications in Knowledge Discovery and Data Mining: PAKDD 2024 Workshops, RAFDA and IWTA, Taipei, May 7-10: Proceedings*, (pp. 3-19) Cham: Springer. https://doi.org/10.1007/978-981-97-2650-9_1 (Published)

From Tweets to token sales: Assessing ICO success through social media sentiments, by HUANG, Donghao; SAMUEL, S.; HUYNH, Quoc Toan; WANG, Zhaoxia. (2024.0). *Trends and Applications in Knowledge Discovery and Data Mining: PAKDD 2024 Workshops, RAFDA and IWTA, Taipei, May 7-10: Proceedings*, (pp. 57-69) Cham: Springer. https://doi.org/10.1007/978-981-97-2650-9_5 (Published)

DLVS4Audio2Sheet: Deep learning-based vocal separation for audio into music sheet conversion, by TEO, Nicole; WANG, Zhaoxia; GHE, Ezekiel; TAN, Yee Sen; OKTAVIO, Kevan; LEWI, Alexander Vincent; ZHANG, Allyne; HO, Seng-Beng. (2024.0). *Trends and Applications in Knowledge Discovery and Data Mining:*

PAKDD 2024 Workshops, RAFDA and IWTA, Taipei, May 7-10: Proceedings, (pp. 95-107) Cham: Springer. https://doi.org/10.1007/978-981-97-2650-9_8 (Published)

From tweets to token sales: Assessing ICO success through social media sentiments, by HUANG, Donghao; SAMUEL, Quoc Toan; HUYNH, Quoc Toan; WANG, Zhaoxia. (2024.0). *Trends and Applications in Knowledge Discovery and Data Mining: PAKDD 2024 Workshops, RAFDA and IWTA, Taipei, May 7-10: Proceedings*, (pp. 57-69) Cham: Springer. https://doi.org/10.1007/978-981-97-2650-9_5 (Published)

Knowledge graph enhanced aspect-based sentiment analysis incorporating external knowledge, by TEO, Autumn; WANG, Zhaoxia; PEN, Haibo; SUBAGDJA, Budhitama; HO, Seng-Beng; QUEK, Boon Kiat. (2023.0). *2023 International Conference on Data Mining, ICDM: Shanghai, December 1-4: Proceedings*, (pp. 791-798) Washington, DC: IEEE Computer Society. <https://doi.org/10.1109/ICDMW60847.2023.00107> (Published)

Video sentiment analysis for child safety, by TAN, Yee Sen; TEO, Nicole Anne Huiying; GHE, Ezekiel En Zhe; FONG, Jolie Zhi Yi; WANG, Zhaoxia. (2023.0). *2023 International Conference on Data Mining, ICDM: Shanghai, December 1-4: Proceedings*, (pp. 783-790) Piscataway, NJ: IEEE. <https://doi.org/10.1109/ICDMW60847.2023.00106> (Published)

Knowledge representation for conceptual, motivational, and affective processes in natural language communication, by HO, Seng Beng; WANG, Zhaoxia; QUEK, Boon-Kiat; CAMBRIA, Erik. (2023.0). *Advances in Brain Inspired Cognitive Systems: 13th International Conference, BICS 2023, Kuala Lumpur, August 5-6: Proceedings*, (pp. 14-30) Cham: Springer. https://doi.org/10.1007/978-981-97-1417-9_2 (Published)

Resale HDB price prediction considering Covid-19 through sentiment analysis, by DURAI, Srinaath Anbu; WANG, Zhaoxia. (2023.0). *Proceedings of the 10th European Conference on Social Media, ECSM 2023, Poland, May 18-19*, (pp. 1-285) UK: ACI. (Published)

Stock market trend forecasting based on multiple textual features: A deep learning method, by HU, Zhenda; WANG, Zhaoxia; HO, Seng-Beng; TAN, Ah-Hwee. (2021.0). *The 33rd IEEE International Conference on Tools with Artificial Intelligence*, US: IEEE. (Published)

Language and robotics: Complex sentence understanding, by HO, Seng-Beng; WANG, Zhaoxia. (2019.0). *Intelligent Robotics and Applications: 12th International Conference, ICIRA 2019, Shenyang, China, August 8-11: Proceedings*, (pp. 641-654) Cham: Springer. https://doi.org/10.1007/978-3-030-27529-7_54 (Published)

On true language understanding, by HO, Seng-Beng; WANG, Zhaoxia. (2019.0). *Artificial Intelligence and Security: 5th International Conference, ICAIS 2019, New York, July 26-28: Proceedings*, (pp. 87-99) Cham: Springer. https://doi.org/10.1007/978-3-030-24265-7_8 (Published)

Stock market prediction analysis by incorporating social and news opinion and sentiment, by WANG, Zhaoxia; HO, Seng-Beng; LIN, Zhiping. (2019.0). *2018 IEEE International Conference on Data Mining Workshops: 17-20 November, Singapore: Proceedings*, (pp. 1375-1380) Los Alamitos, CA: IEEE Computer Society. <https://doi.org/10.1109/ICDMW.2018.00195> (Published)

Comparing ELM with SVM in the field of sentiment classification of social media text data, by CHEN, Zhihuan; WANG, Zhaoxia; LIN, Zhiping; YANG, Ting. (2018.0). *Proceedings of the 9th International Conference on Extreme Learning Machine (ELM 2018), Singapore, November 21-23*, (pp. 336-344) Singapore: Springer. https://doi.org/10.1007/978-3-030-23307-5_36 (Published)

Fine-grained sentiment analysis of social media with emotion sensing, by WANG, Zhaoxia; CHONG, Chee Seng; LAN, Landy; YANG, Yinping; HO, Beng-Seng; TONG, Joo Chuan. (2017.0). *2016 Future Technologies Conference (FTC): San Francisco, CA, December 6-7: Proceedings*, (pp. 1361-1364) Piscataway, NJ: IEEE. <https://doi.org/10.1109/FTC.2016.7821783> (Published)

Lexicon knowledge extraction with sentiment polarity computation, by WANG, Zhaoxia; TONG, Vincent Joo Chuan; RUAN, Pingcheng; LI, Fang. (2016.0). *16th IEEE International Conference on Data Mining Workshops: 12-15 December, Barcelona, Spain: Proceedings*, (pp. 978-983) Los Alamitos, CA: IEEE Computer Society. <https://doi.org/10.1109/ICDMW.2016.0142> (Published)

Issues of social data analytics with a new method for sentiment analysis of social media data, by WANG, Zhaoxia; TONG, Victor J. C.; CHAN, David. (2014.0). *2014 IEEE 6th International Conference on Cloud Computing Technology and Science: December 15-18, Singapore: Proceedings*, (pp. 899-904) Piscataway, NJ: IEEE. <https://doi.org/10.1109/CloudCom.2014.40> (Published)

Anomaly detection through enhanced sentiment analysis on social media data, by WANG, Zhaoxia; JOO, Victor; TONG, Chuan; XIN, Xin; CHIN, Hoong Chor. (2014.0). *2014 6th IEEE International Conference on Cloud Computing Technology and Science: 15-18 December, Singapore: Proceedings*, (pp. 917-922) Los Alamitos, CA: IEEE Computer Society. <https://doi.org/10.1109/CloudCom.2014.69> (Published)

Enhancing machine-learning methods for sentiment classification of web data, by WANG, Zhaoxia; TONG, Victor Joo Chuan; CHIN, Hoong Chor. (2014.0). *Information Retrieval Technology: 10th Asia Information Retrieval Societies Conference, AIRS 2014, Kuching, Malaysia, December 3-5: Proceedings*, (pp. 394-405) Cham: Springer. https://doi.org/10.1007/978-3-319-12844-3_34 (Published)

Decision trees to model the impact of disruption and recovery in supply chain networks, by PONNANBALAM, Loganathan; WENBIN, L.; FU, Xiuju; YIN, Xiaofeng; WANG Zhaoxia; GOH, Rick S. M.. (2013.0). *Proceedings of the 2013 IEEE International Conference on Industrial Engineering and Engineering Management, Bangkok, Thailand, December 10-13*, (pp. 948-952) New Jersey: IEEE. <https://doi.org/10.1109/IEEM.2013.6962551> (Published)

Social media for supply chain risk management, by FU, Xiuju; GOH, Rick S. M.; Tong, J. C.; PONNANBALAM, Loganathan; YIN, Xiaofeng; WANG, Zhaoxia; Xu, H. Y.; LU, Sifei. (2013.0). *2013 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM): December 10-13, Bangkok: Proceedings*, (pp. 206-210) Los Alamitos, CA: IEEE Computer Society. <https://doi.org/10.1109/IEEM.2013.6962404> (Published)

An agent-based network analytic perspective on the evolution of complex adaptive supply chain networks, by PONNANBALAM, Loganathan; Tan, A.; FU, Xiuju; YIN, Xiaofeng; WANG Zhaoxia; GOH, Rick S. M.. (2013.0). *Proceedings of the 2013 3rd International Conference on Instrumentation Control and Automation, Ungasan, Indonesia, August 28-30*, (pp. 68-73) New Jersey: IEEE. <https://doi.org/10.1109/ICA.2013.6734048> (Published)

RiskVis: Supply chain visualization with risk management and real-time monitoring, by GOH, Rick S. M.; WANG, Zhaoxia; YIN, Xiaofeng; FU, Xiuju; PONNANBALAM, Loganathan; LU, Sifei; Li, Xiaorong. (2013.0). *2013 IEEE International Conference on Automation Science and Engineering (CASE): August 17-20, Madison, WI: Proceedings*, (pp. 207-212) Piscataway, NJ: IEEE. <https://doi.org/10.1109/CoASE.2013.6653910> (Published)

Disclosing climate change patterns using an adaptive markov chain pattern detection method, by WANG, Zhaoxia; LEE, Gary; CHAN, Hoong Maeng; LI, Reuben; FU, Xiuju; GOH, Rick; POH KIM, Pauline A. W.; HIBBERD, Martin L.; CHIN, Hoong Chor. (2013.0). *2013 International Conference on Social Intelligence and Technology (SOCIETY): May 8-10, State College PA: Proceedings*, (pp. 72-79) Los Alamitos, CA: IEEE Computer Society. <https://doi.org/10.1109/SOCIETY.2013.15> (Published)

Visualization for anomaly detection and data management by leveraging network, sensor and GIS techniques, by WANG, Zhaoxia; CHONG, Chee Seng; GOH, Rick S. M.; ZHOU, Wanqing; PENG, Dan; CHIN, Hoong Chor. (2012.0). *2012 IEEE International Conference on Parallel and Distributed Systems 18th ICPADS: December 17-19, Singapore: Proceedings*, (pp. 907-912) Piscataway, NJ: IEEE. <https://doi.org/10.1109/ICPADS.2012.149> (Published)

Supervisory evolutionary optimization strategy for adaptive maintenance schedules, by WANG, Zhaoxia; CHANG, C. S.. (2011.0). *2011 IEEE International Symposium on Industrial Electronics (ISIE): June 27-30, Gdansk, Poland: Proceedings*, (pp. 1137-1142) Piscataway, NJ: IEEE. <https://doi.org/10.1109/ISIE.2011.5984204> (Published)

Online fault detection of induction motors using frequency domain independent components analysis, by WANG, Zhaoxia; CHANG, C. S.. (2011.0). *2011 IEEE International Symposium on Industrial Electronics (ISIE): June 27-30, Gdansk, Poland: Proceedings*, (pp. 2132-2137) Piscataway, NJ: IEEE. <https://doi.org/10.1109/ISIE.2011.5984490> (Published)

A feature based frequency domain analysis algorithm for fault detection of induction motors, by WANG, Zhaoxia; CHANG, C. S.; ZHANG Yifan. (2011.0). *2011 6th IEEE Conference on Industrial Electronics and Applications ICIEA: June 21-23, Beijing: Proceedings*, (pp. 27-32) Piscataway, NJ: IEEE. <https://doi.org/10.1109/ICIEA.2011.5975545> (Published)

Automobile exhaust gas detection based on fuzzy temperature compensation system, by WANG, Zhiyong; DING, Hao; HAO, Fufei; WANG, Zhaoxia; SUN, Zhen; LI, Shujin. (2010.0). *Artificial intelligence and computational intelligence: International Conference, AICI 2010, Sanya, China, October 23-24: Proceedings*, (pp. 153-160) Cham: Springer. https://doi.org/10.1007/978-3-642-16530-6_19 (Published)

A structure first image inpainting approach based on self-organizing map (SOM), by CHEN, Bo; WANG, Zhaoxia; BAI, Ming; WANG, Quan; SUN, Zhen. (2010.0). *2010 2nd International Conference on Information Science and Engineering (ICISE): 4-6 December, Hangzhou, China: Proceedings*, (pp. 1-4) Piscataway, NJ: IEEE. <https://doi.org/10.1109/ICISE.2010.5690599> (Published)

Hybrid time-frequency domain analysis for inverter-fed induction motor fault detection, by Chua, T. W.; Tan, W. W.; WANG, Zhaoxia; Chang, C. S.. (2010.0). *2010 IEEE International Symposium on Industrial Electronics: Bari, Italy, July 4-7: Proceedings*, (pp. 1633-1638) Piscataway, NJ: IEEE. <https://doi.org/10.1109/ISIE.2010.5637554> (Published)

Hybrid time-frequency domain analysis for inverter-fed induction motor fault detection, by CHUA, T. W.; TAN, W. W.; WANG, Zhaoxia; CHANG, C. S.. (2010.0). *Proceedings of the 2010 IEEE International Symposium on Industrial Electronics, Bari, Italy, July 4-7*, (pp. 1633-1638) New York: IEEE. <https://doi.org/10.1109/ISIE.2010.5637554> (Published)

Further exploration on relationship between crisp sets and fuzzy sets, by WANG, Zhaoxia; WANG, Quan; BAI, Ming; CHEN Zeng-qiang; SUN, Zhen. (2010.0). *Proceedings of the 2010 2nd International Conference on Computer and Automation Engineering (ICCAE) Singapore, February 26-28*, (pp. 609-613) New York: IEEE. <https://doi.org/10.1109/ICCAE.2010.5451688> (Published)

Adaptive type-2 fuzzy maintenance advisor for offshore power systems, by WANG, Zhaoxia; CHANG, C. S.; YANG, Fan; Tan, W. W.. (2009.0). *IEEE International Conference on Systems, Man and Cybernetics SMC 2009: 11-14 October, San Antonio, TX: Proceedings*, (pp. 4520-4526) Piscataway, NJ: IEEE. <https://doi.org/10.1109/ICSMC.2009.5346899> (Published)

Online fault detection of induction motors using independent component analysis and fuzzy neural network, by WANG, Zhao-Xia; CHANG, C. S.; GERMAN, X.; TAN, W.W.. (2009.0). *Proceedings of the 8th International Conference on Advances in Power System Control, Operation and Management. London, United Kingdom, 2009 November 8-11*, London, UK: Institute of Engineering and Technology. (Published)

Ensemble and individual noise reduction method for induction-motor signature analysis, by WANG, Zhao-Xia; CHANG, C.S.; CHUA, TW; TAN, W.W. (2009.0). *Proceedings of the 8th IET International Conference on Advances in Power System Control, Operation and Management, Hong Kong, China, 2009 November 8-11.*, England: Institute of Engineering and Technology. (Published)

Detecting automotive exhaust gas based on fuzzy inference system, by LI, Shujin; BAI, Ming; WANG, Quan; CHEN, Bo; ZHAO, Xiaobing; YANG, Ting; WANG, Zhaoxia. (2009.0). *2009 6th International Conference on Fuzzy Systems and Knowledge Discovery (FSKD): August 14-16, Tianjin: Proceedings*, (pp. 267-270) Los Alamitos, CA: IEEE Computer Society. <https://doi.org/10.1109/FSKD.2009.137> (Published)

Multilayer image inpainting approach based on neural networks, by WANG, Quan; WANG, Zhaoxia; CHANG, Che Sau; YANG, Ting. (2009.0). *2009 5th International Conference on Natural Computation ICNC: August 14-16, Tianjin: Proceedings*, (pp. 459-462) Los Alamitos, CA: IEEE Computer Society. <https://doi.org/10.1109/ICNC.2009.127> (Published)

Study of the minimum spanning hyper-tree routing algorithm in wireless sensor networks, by YANG, Ting; SUN, Yugeng; WANG, Zhaoxia; ZHANG, Juwei; DING, Yingqiang. (2007.0). *Proceedings of the 2007 IET Conference on Wireless, Mobile and Sensor Networks, Shanghai, December 12-14*, (pp. 245-248) New York: IEEE. <https://doi.org/10.1049/cp:20070129> (Published)

Predicting nonlinear network traffic using fuzzy neural network, by WANG, Zhaoxia; HAO, Tingzhu; CHEN, Zengqiang; YUAN, Zhuzhi. (2003.0). *ICICS-PCM 2003: Proceedings of the 2003 Joint Conference of the Fourth International Conference on Information, Communications & Signal Processing and Fourth Pacific Rim Conference on Multimedia, December 15-18, Singapore*, (pp. 1697-1701) Piscataway, NJ: IEEE. <https://doi.org/10.1109/ICICS.2003.1292756> (Published)

TEACHING

Teaching Areas

Undergraduate Programmes:

Introduction to Machine Learning

Data Mining and Business Analytics

Machine Learning & Applications

Postgraduate Professional Programmes:

Natural Language Processing for Smart Assistants

Courses Taught

Singapore Management University

Undergraduate Programmes :

Data Mining and Business Analytics

Introduction to Machine Learning

IS/SMT/C&L Project Experience (Research)

IS/SMT Project Experience (Applications)

Machine Learning & Applications

Text Mining and Language Processing

Postgraduate Professional Programmes :

Capstone Project - Data Science and Engineering

Natural Language Processing for Smart Assistants

Project

Smart Assistants for Natural Language Processing

Postgraduate Research Programmes :

Empirical Research Project I

Empirical Research Project II

Empirical Research Project III