

Resume

Personal Details



Name: Xinlu Zong

Gender: Female

Date of Birth: September 28th, 1981

Education: Ph.D.

Major: Computer application

Research Interests: Intelligent system; Optimization; Evacuation

E-mail: zongxinlu@126.com

Education

Sep 2008-Jun 2011 Wuhan University of Technology, Wuhan, China **Ph.D.**

Major in: Computer Application

Sep 2004-Jun 2007 Wuhan University of Technology, Wuhan, China **Master**

Major in: Computer Application

Sep 2000-Jun 2004 Wuhan University of Technology, Wuhan, China **Bachelor**

Major in: Computer Science and Technology

Research Experiences

1. Jun 2018-Dec 2021 National Natural Science Foundation of China (61772180)
2. Jun 2016-Dec 2018 National Natural Science Foundation of China (61602161)
3. Jun 2017-Dec 2019 National Natural Science Foundation of China (61602162)
4. Jun 2013-Dec 2015 National Natural Science Foundation of China (61202287)
5. Jun 2015-Dec 2016 Natural Science Foundation of Hubei Province, China
(2015CFB594)

Monograph

Xinlu Zong, Chunzhi Wang, Guofeng Zhu. Emergency evacuation simulation modeling and optimization decision-making. China Science Publishing & Media Ltd, March 2018, ISBN: 9787030557216

Publications

1. **Xinlu Zong**, Hejing Li, Aiping Liu, Hui Xu. A crowd simulation model based on emotional cognition and contagion for emergency evacuation. *Journal of Intelligent & Fuzzy Systems*, 2024, 46(4): 10187-10200.
2. **Zong Xinlu**, Chen Zhen, Wei Siwei. Local-Global Spatial-Temporal Graph Convolutional Network for Traffic Flow Forecasting. *Electronics*, 2024, 13 (3), 636.
3. **Xinlu Zong**, Yin Liu, Zhiwei Ye, Xue Xia. Multi-strategy ensemble Harris hawks optimization for smooth path planning of mobile robots. *International Journal of Modern Physics C*, 2024, 2450083.
4. **Xinlu Zong**, Yuan Xu, Zhiwei Ye, Zhen Chen. Pedestrian detection based on channel feature fusion and enhanced semantic segmentation. *Applied Intelligence*,

2023, 53, 30203–30218.

5. **Xinlu Zong**, Zhen Chen, and Lu Zhang. Crowd abnormal event detection based on motion entropy and dual support vector data description. *International Journal of Modern Physics C*, 2023, 34(07), 2350087.
6. **Xinlu Zong**, Jiajie Liu, Zhiwei Ye, Yin Liu. Whale optimization algorithm based on Levy flight and memory for static smooth path planning. *International Journal of Modern Physics C*, 2022, 33(10), 2250138.
7. **Xinlu Zong**, Jingxi Yi, Chunzhi Wang, Zhiwei Ye, Naixue Xiong. An Artificial Fish Swarm Scheme Based on Heterogeneous Pheromone for Emergency Evacuation in Social Networks. *Electronics* 2022, 11(4), 649.
8. **Xinlu Zong**, Aiping Liu, Chunzhi Wang, Zhiwei Ye, Jiayuan Du. Indoor evacuation model based on visual-guidance artificial bee colony algorithm. *Building Simulation*, 2022, 15(4): 645-658.
9. **Xinlu Zong**, Jiayuan Du. Evacuation simulation model based on multi-target driven artificial bee colony algorithm. *Journal of Shandong University (Engineering Science)* 2021, 51(2): 1-6.
10. **Xinlu Zong**, Ruicheng Li, Zhiwei Ye. An intrusion detection model based on improved whale optimization algorithm and XGBoost. *The 11th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications*, 22-25 September, 2021, Cracow, Poland. pp.542-547
11. **Xinlu Zong**, Yijie Chen, Aiping Liu, et al. Abnormal Event Detection in Video Based on Sparse Representation. *Proceedings of the 15th International Conference on Computer Science & Education (ICCSE 2020)*, pp.649-653.
12. **Xinlu Zong**, Lu Zhang, Jiayuan Du, Liu Wei, Qian Huang. Abnormal Event Detection in Video Based on SVDD. *Proceedings of the 10th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications*, 18-21 September, 2019, Metz, France, pp. 368-371.
13. **Xinlu Zong**, Jiayuan Du, Wei Liu, Lu Zhang, Qian Huang. Indoor Emergency Evacuation Model Based on Artificial Bee Colony Algorithm. *Proceedings of the 10th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications* 18-21 September, 2019, Metz, France, pp.18-23.
14. **Xinlu Zong**, Chunzhi Wang, Jiayuan Du, Yingli Jiang. Tree hierarchical directed evacuation network model based on artificial fish swarm algorithm. *International Journal of Modern Physics C*, 2019, 30(11): 1950097-1-1950097-23.
15. **Xinlu Zong**, Xinkai Fan. Simulation Model of Emergency Evacuation Based on Artificial Fish Swarm Algorithm. *Proceedings of the 13th International Conference on Computer Science & Education (ICCSE 2018)*, 2018, pp.265-270.
16. **Xinlu Zong**, Chunzhi Wang, Hongwei Chen. An evacuation model based on co-evolutionary multi-particle swarms optimization for pedestrian – vehicle mixed traffic flow. *International Journal of Modern Physics C*, 2017, 28(12): 1750142.
17. **Xinlu Zong**, Hui Xu. Potential Field Driven Evacuation Model Based on Ant Colony Algorithm. *Proceedings of the 2017 13th International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery (ICNC-FSKD*

- 2017), 2017, pp. 768-772.
18. **Xinlu Zong**, Hui Xu. Reform of Teaching Mode for Computer Specialty Based on MOOCs. Proceedings of the 12th International Conference on Computer Science & Education (ICCSE 2017), August 22-25, 2017, pp.705-708.
 19. **Xinlu Zong**, Yingli Jiang, Chunzhi Wang. Evacuation Behaviors and Link Selection Strategy based on Artificial Fish Swarm Algorithm. Proceedings of 2016 7th International Conference on Cloud Computing and Big Data, 2016, pp.279-283.
 20. **Xinlu Zong**, Yingli Jiang. Pedestrian-vehicle mixed evacuation model based on multi-particle swarm optimization. Proceedings of the 11th International Conference on Computer Science and Education, 2016, pp.568-572.
 21. **Xinlu Zong**, Shengwu Xiong, Zhixiang Fang. A conflict-congestion model for pedestrian-vehicle mixed evacuation based on discrete particle swarm optimization algorithm. Computers & Operations Research, 2014, 44(4): 1-12.
 22. **Xinlu Zong**, Shengwu Xiong, Hongwei Chen. System-Individual objectives driven evolutionary model based on particle swarm optimization for pedestrian-vehicle mixed evacuation. International Journal of Applied Mathematics and Statistics, 2013, 44(14): 217-225.
 23. **Xinlu Zong**, Chunzhi Wang, Hui Xu. Density-based adaptive wavelet kernel SVM model for P2P traffic classification. International Journal of Future Generation Communication and Networking, 2013, 6(6): 25-36.
 24. **Xinlu Zong**, Shengwu Xiong, Zhixiang Fang. Optimization and proportion analysis of pedestrian-vehicle mixed evacuation based on ant colony algorithm. Systems Engineering-Theory & Practice, 2012, 32(7): 1610-1617.
 25. **Xinlu Zong**, Shengwu Xiong, Hui Xu, Pengfei Duan. Space-time simulation model based on particle swarm optimization algorithm for stadium evacuation. Proceedings of the 2014 IEEE Congress on Evolutionary Computation(CEC 2014), 2014, pp. 194-201.
 26. Zhixiang Fang, **Xinlu Zong**, Qingquan Li, Qiuping Li, Shengwu Xiong. Hierarchical multi-objective evacuation routing in stadium using ant colony optimization approach. Journal of Transport Geography, 2011. 19(3): 443-451.
 27. **Xinlu Zong**, Shengwu Xiong, Xiaohong Li, Zhixiang Fang. Multi-objective Optimization for Massive Pedestrian Evacuation Using Ant Colony Algorithm. Proceedings of The International Conference on Swarm Intelligence (ICSI'2010), Part I, LNCS 6145, pp. 636–642, 2010.
 28. **Xinlu Zong**, Shengwu Xiong, Zhixiang Fang, Wanru Lin. Multi-objective Ant Colony Optimization Model for Emergency Evacuation. Proceedings of The Sixth International Conference on Natural Computation (ICNC'10), pp. 2774-2778.
 29. **Xinlu Zong**, Shengwu Xiong, Xiaohong Li, Zhixiang Fang. Multi-ant colony System for Evacuation Routing Problem with Mixed Traffic Flow. Proceedings of the IEEE Congress on Evolutionary Computation, CEC 2010, Barcelona, Spain, 18-23 July 2010, pp. 1-6.

Patents

1. **Xinlu Zong**, Shiqin Liu, Zhiwei Ye, Chunzhi Wang, Wei Liu; Feature selection

methods and devices, computing devices, and storage media of Biomedical data (CN 112908416 B), Patent licensing date: Feb 2, 2024

2. **Xinlu Zong**, Zhiwei Ye, Chunzhi Wang, Wei Liu, Lingyu Yan, Jiayuan Du, Aiping Liu; A simulation method and system for multi-objective guided personnel evacuation based on bee colony algorithm (CN 111046562 B), Patent licensing date: Jun 16, 2023
3. **Xinlu Zong**, Jiajie Liu, Yin Liu, Chunzhi Wang, Zhiwei Ye, Hongwei Chen, Wei Liu; A smooth path planning method based on whale optimization algorithm (CN 114489061 B), Patent licensing date: May 16, 2023e
4. **Xinlu Zong**, Chunzhi Wang, Zhiwei Ye, Wei Liu, Hui Xu, Hongwei Chen, Xinkai Fan; Multi-ant colony competition collaborative evacuation optimization method based on entropy (CN 107358333 B), Patent licensing date: Sep 3, 2019
5. **Xinlu Zong**, Chunzhi Wang, Zhiwei Ye, Wei Liu, Hui Xu, Hongwei Chen, Yingli Jiang; A simulation optimization method for mixed evacuation of pedestrians and vehicles based on multi-particle swarm optimization (CN 106022510 B), Patent licensing date: Apr 5, 2019
6. **Xinlu Zong**, Yujie Yin, Zhiwei Ye, Chunzhi Wang, Wei Liu, Hongwei Chen, Hui Xu; An indoor evacuation simulation optimization method based on potential driven cellular ant colony algorithm (CN 104361178 B), Patent licensing date: Oct 26, 2018

Software Copyrights

1. Abnormal detection system for public places V1.0 (2021SR0941797), Jun 26, 2021
2. Evolutionary game theory simulation software V1.0 (2020SR1820250), Dec 15, 2020
3. Pedestrian emergency evacuation simulation system V1.0 (2020SR1818046), Dec 15, 2020
4. Simulation and optimization system for mixed evacuation of pedestrians and vehicles V1.0 (2013SR140238), Jul 25, 2013

Awards & Honors

1. Science and Technology Progress Award of Hubei Province: (Second Prize); Chunzhi Wang, Lingyu Yan, Jun Zeng, Jiansen Yuan, Ming Wei, Zhiwei Ye, Min Tan, **Xinlu Zong**, Xiang Hu, Ruoxi Wang; Research and application of key technologies for public services in smart cities; 2019.
2. Science and Technology Progress Award of Hubei Province: (Third Prize); Chunzhi Wang, Wei Liu, Hui Xu, **Xinlu Zong**, Zhiwei Ye, Yun Sun, Hongwei Chen, Zhengyong Huang, Jinxu Huang, Maorong Yu; 2016.