Journal Publications

† indicates equal contribution, and * indicates corresponding author.

1. Meiyuan Zou†, Jiajie Yu†, Yong Lv, Bo Lu*, **Wenzheng Chi***, and Lining Sun, "A Novel Day-to-Night Obstacle Detection Method for Excavators based on Image Enhancement and Multi-sensor Fusion," *IEEE Sensors Journal,* 2023, Early Access.

2. Yang Hong, Zhiyu Ding, Yuan Yuan, **Wenzheng Chi***, and Lining Sun, "Obstacle Avoidance Learning for Robot Motion Planning in Human-Robot Integration Environments," *IEEE Transactions on Cognitive and Developmental Systems,* 2023, Early Access.

3. Yuan Yuan, Jie Liu, **Wenzheng Chi***, Guodong Chen*, and Lining Sun*, "A Gaussian Mixture Model based Fast Motion Planning Method Through Online Environmental Feature Learning," *IEEE Transactions on Industrial Electronics,* 2023, 70(4): 3955-3965.

4. Songlin Wei, Guodong Chen*, **Wenzheng Chi***, Zhenghua Wang, and Lining Sun, "Object Clustering with Dirichlet Process Mixture Model for Data Association in Monocular SLAM," *IEEE Transactions on Industrial Electronics,* 2023, 70(1): 594-603.

5. Zhiyu Ding†, Jie Liu†, **Wenzheng Chi***, Jiankun Wang, Guodong Chen, Lining Sun, "PRTIRL Based Socially Adaptive Path Planning for Mobile Robots," *International Journal of Social Robotics,* 2022, Early Access.

6. Jie Liu†, Yong Lv†, Yuan Yuan, **Wenzheng Chi***, Guodong Chen, and Lining Sun, "An Efficient Robot Exploration Method based on Heuristics Biased Sampling," *IEEE Transactions on Industrial Electronics,* 2022, Early Access.

7. Jiankun Wang†, **Wenzheng Chi**†, Chenming Li, Max Q.-H. Meng*, "Efficient Robot Motion Planning Using Bidirectional-Unidirectional RRT Extend Function," *IEEE Transactions on Automation Science and Engineering,* 2022, 19(3): 1859 - 1868.

8. **Wenzheng Chi**, Zhiyu Ding, Jiankun Wang*, Guodong Chen*, and Lining Sun*, "A Generalized Voronoi Diagram based Efficient Heuristic Path Planning Method for RRTs in Mobile Robots," *IEEE Transactions on Industrial Electronics,* 2022, 69(5): 4926-4937. **(2022 ESI Highly Cited Papers)**

9. **Wenzheng Chi**†, Jiankun Wang†, Zhiyu Ding, Guodong Chen*, and Lining Sun*, "A Reusable Generalized Voronoi Diagram Based Feature Tree for Fast Robot Motion Planning in Trapped Environments," *IEEE Sensors Journal,* 2022, 22(18): 17615 - 17624.

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12. Jiankun Wang, Jianbang Liu, Weinan Chen, **Wenzheng Chi**, Max Q.-H. Meng*, "Robot Path Planning via Neural-Networks-Driven Prediction," *IEEE Transactions on Artificial Intelligence,* 2022, 3(3): 451 - 460.

13. Zheng Wang, Hui Xu, Na Lv, Wei Tao*, Guodong Chen, **Wenzheng Chi***, and Lining Sun, "Dynamic Obstacle Avoidance for Application of Human-Robot Cooperative Dispensing Medicines," *Journal of Shanghai Jiaotong University (Science),* 2022, 27: 24–35.

14. Dong Li, Yulin Fan, Na Lv, Guodong Chen, Zheng Wang, and **Wenzheng Chi**, "Safety Protection Method of Rehabilitation Robot Based on fNIRS and RGB-D Information Fusion," *Journal of Shanghai Jiaotong University (Science),* 2022, 27: 45-54.

15. Yong Lv, Yuemei Fang, **Wenzheng Chi***, Guodong Chen*, and Lining Sun*, "Object Detection for Sweeping Robots in Home Scenes (ODSR-IHS): a Novel Benchmark Dataset," *IEEE Access,* 2021, 9: 17820-17828.

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20. Zihao Ding[†], Hui Xu[†], Guodong Chen, Zheng Wang*, **Wenzheng Chi***, Heng Zhang, Zhenhua Wang, Lining Sun, Guilin Yang, and Yifang Wen, "Three-dimensional Reconstruction Method based on Bionic Active Sensing in Precision Assembly," *Applied Optics,* 2020, 59(3): 846-856.

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25. Renzheng Zhang[†], Guodong Chen[†], Zheng Wang*, **Wenzheng Chi***, Zhenhua Wang, Lining Sun, Guilin Yang, and Yifang Wen, "Multi-color Space Learning for Image Segmentation based on a Support Vector Machine," *OSA Continuum,* 2019, 2(11): 3050-3065.

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1. Songlin Wei, Guodong Chen*, **Wenzheng Chi***, Zhenhua Wang, and Lining Sun, "3D Object Aided Self-Supervised Monocular Depth Estimation," *2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS),* 2022, pp. 10635-10642.

2. Dingfeng Chen, Qingchuan Xu, Jie Liu, Meiyuan Zou, **Wenzheng Chi***, and Lining Sun, "A Generalized Voronoi Diagram based Robot Exploration Method for Mobile Robots," *2022 IEEE International Conference on Robotics and Biomimetics (ROBIO),* 2022, pp. 1029-1035.

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4. Yao Wang, Yuqi Kong, Zhiyu Ding, **Wenzheng Chi***, and Lining Sun, "NRTIRL Based NN-RRT* Path Planner in Human-Robot Interaction Environment," *2022 14th International Conference on Social Robotics (ICSR),* 2022, pp. 496–508.

5. Meiyuan Zou[†], Qingchuan Xu[†], Jianfeng Bian, Dingfeng Chen, **Wenzheng Chi***, and Lining Sun, "An Efficient Medicine Identification and Delivery System based on Mobile Manipulation Robot," *2022 14th International Conference on Social Robotics (ICSR),* 2022, pp. 417–426.

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7. Meiyuan Zou, Jiajie Yu, Bo Lu, **Wenzheng Chi***, and Lining Sun, "Active Pedestrian Detection for Excavator Robots based on Multi-Sensor Fusion," *2022 IEEE International Conference on Real-time Computing and Robotics (RCAR),* 2022, pp. 255-260.

8. Qingchuan Xu, Yang Hong, Yueyuan Zhang, **Wenzheng Chi***, and Lining Sun, "Grounding Language to Natural Human-robot Interaction in Robot Navigation Tasks," *2021 IEEE International Conference on Robotics and Biomimetics (ROBIO),* 2021, pp. 352-357.

9. Rongguang Ye, Qingchuan Xu, Jie Liu, Yang Hong, Chengfeng Sun, **Wenzheng Chi***, and Lining Sun, "A Natural Language Instruction Disambiguation Method for Robot Grasping," *2021 IEEE International Conference on Robotics and Biomimetics (ROBIO),* 2021, pp. 601-606.

10. Jianbang Liu, Baopu Li, Tingguang Li, **Wenzheng Chi**, Jiankun Wang*, and Max Q.-H. Meng*, "Learning-based Fast Path Planning in Complex Environments," *2021 IEEE International Conference on Robotics and Biomimetics (ROBIO),* 2021, pp. 1351-1358.

11. Jie Liu, Yong Lv, Yuan Yuan, **Wenzheng Chi***, Guodong Chen*, and Lining Sun*, "A Prior Information Heuristic based Robot Exploration Method in Indoor Environment," *2021 IEEE International Conference on Real-time Computing and Robotics (RCAR),* 2021, pp. 129-134. **(Best Student Paper Award)**

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