

Jiankun Wang

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Education

- **B.Eng., Shandong University** 09/2011 – 06/2015
School of Control Science & Engineering GPA: 91.19/100 Rank: 1/310
- **Ph.D., The Chinese University of Hong Kong** 08/2015 – 07/2019
Advisor: Prof. Max Q.-H. Meng Dept. of Electronic Engineering
Research field: Motion and Path Planning, Human Robot Interaction
- **Visiting Student Researcher, Stanford University** 07/2018 – 12/2018
Advisor: Prof. Oussama Khatib Dept. of Computer Science
Research field: Robotics, Motion Planning and Control

Work

- **Postdoc, The Chinese University of Hong Kong** 08/2019 – 08/2020
Advisor: Prof. Max Q.-H. Meng Dept. of Electronic Engineering
Research field: Motion and Path Planning, Human Robot Interaction
- **Research Assistant Professor, Southern University of Science and Technology** 09/2020 – present
Advisor: Prof. Max Q.-H. Meng Dept. of Electronic and Electrical Engineering
Research field: Motion and Path Planning, Robot Perception, Artificial Intelligence

Journal Publications

† indicates equal contribution.

- 10. **Jiankun Wang**, Max Q.-H. Meng, "Real-time Decision Making and Path Planning for Robotic Autonomous Luggage Trolley Collection at Airports," *IEEE Transactions on Systems, Man and Cybernetics: Systems*, 2020, accepted.
- 9. **Jiankun Wang**, Baopu Li, Max Q.-H. Meng, "Kinematic Constrained Bi-directional RRT with Efficient Branch Pruning for Robot Path Planning," *Expert Systems with Applications*, accepted.
- 8. **Jiankun Wang**, Max Q.-H. Meng, Oussama Khatib, "EB-RRT: Optimal Motion Planning for Mobile Robots," *IEEE Transactions on Automation Science and Engineering*, 2020, 17(4).
- 7. **Jiankun Wang**, Wenzheng Chi, Chenming Li, Chaoqun Wang, Max Q.-H. Meng, "Neural RRT*: Learning-based Optimal Path Planning," *IEEE Transactions on Automation Science and Engineering*, 2020, 17(4).
- 6. **Jiankun Wang**, Max Q.-H. Meng, "Optimal Path Planning using Generalized Voronoi Graph and Multiple Potential Functions," *IEEE Transactions on Industrial Electronics*, 2020, 67(12).
- 5. **Jiankun Wang**, Max Q.-H. Meng, "Socially Compliant Path Planning for Robotic Autonomous Luggage Trolley Collection at Airports," *Sensors*, 2019, 19(12).
- 4. **Jiankun Wang**, Wenzheng Chi, Mingjie Shao and Max Q.-H. Meng, "Finding a High-Quality Initial Solution for the RRTs Algorithms in 2D Environments," *Robotica*, 2019, 37(10).
- 3. Chaoqun Wang†, **Jiankun Wang**†, et al., "Safe and Robust Mobile Robot Navigation in Uneven Indoor Environments," *Sensors*, 2019, 19(13).
- 2. Wenzheng Chi, Chaoqun Wang, **Jiankun Wang**, Max Q.-H. Meng, "Risk-DTRRT-Based Optimal Motion Planning Algorithm for Mobile Robots," *IEEE Transactions on Automation Science and Engineering*, 2018, 16(3).
- 1. Chaoqun Wang, Jiyu Cheng, **Jiankun Wang**, Xintong Li and Max Q.-H. Meng, "Efficient Object Search With Belief Road Map Using Mobile Robot," *IEEE Robotics and Automation Letters*, 2018, 3(4).

Conference Publications

- 7. **Jiankun Wang**, Max Q.-H. Meng, "Path Planning for Nonholonomic Multiple Mobile Robot System with Applications to Robotic Autonomous Luggage Trolley Collection at Airports," *2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*.

- 6. **Jiankun Wang**, Xintong Li, Wenzheng Chi, Max Q.-H. Meng, "Tropistic RRT*: An Efficient Planning Algorithm via Adaptive Restricted Sampling Space," **2018 IEEE International Conference on Information and Automation (ICIA)**.
- 5. **Jiankun Wang**, Xintong Li, Max Q.-H. Meng, "An Improved RRT Algorithm Incorporating Obstacle Boundary Information," **2016 IEEE International Conference on Robotics and Biomimetics (ROBIO)**.
- 4. Keyu Li, Yangxin Xu, **Jiankun Wang**, Max Q.-H. Meng, "SARL: Deep Reinforcement Learning based Human-Aware Navigation for Mobile Robot in Indoor Environments," **2019 IEEE International Conference on Robotics and Biomimetics (ROBIO)**.
- 3. Wenzheng Chi, **Jiankun Wang**, Max Q.-H. Meng, "Risk-Informed-RRT*: A Sampling-based Human-friendly Motion Planning Algorithm for Mobile Service Robots in Indoor Environments," **2018 IEEE International Conference on Information and Automation (ICIA)**.
- 2. Frank Powen Lo, Xintong Li, **Jiankun Wang**, Max Q.-H. Meng, "Motion Artifact Reduction in PPG Signals based on Periodic Component Factorization," **39th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'2017)**.
- 1. Frank Powen Lo, Xintong Li, **Jiankun Wang**, Jiyu Cheng, Max Q.-H. Meng, "Continuous Systolic and Diastolic Blood Pressure Estimation utilizing Long Short-term Memory Network," **39th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'2017)**.

Honors And Awards

- **Reaching Out Award of CUHK** 2018 – 2019
Award for exchange student
- **Global Scholarship Programme for Research Excellence** 2018 – 2019
*Award for **Excellent** exchange student*
- **Hong Kong Ph.D. Fellowship** 2015 – 2019
***Highest** scholarship for students study in Hong Kong. Selection based on: academic excellence, research ability and potential, communication and interpersonal skills, as well as leadership abilities.*
- **Outstanding Graduate of Shandong Province (top 0.5%)** 2015 – 2016
***Highest** award for graduates in Shandong Province*
- **The President Scholarship of Shandong University (top 0.2%)** 2014 – 2015
***Highest** award for students in Shandong University*
- **Outstanding Student of Shandong Province (top 0.5%)** 2014 – 2015
***Highest** award for students in Shandong Province*
- **First Prize – International Underwater Robot Competition** 2014 – 2015
Award for winners in underwater robot competition
- **Champion – China Robot Competition** 2013 – 2014
***Highest** award in Robot Competition, China*
- **National Scholarship (top 2%)** 2012 – 2013
***Highest** national wide scholarship for undergraduate students in China*
- **First-class Scholarship of Shandong University (top 5%)** 2012 – 2014
Award for outstanding students

Personal Activities

- **Reviewer of Journals**
 - IEEE Transactions on Cybernetics
 - IEEE Transactions on Industrial Electronics
 - IEEE Transactions on Vehicular Technology
 - SCIENCE CHINA Information Science
 - Applied Science

- IEEE Access
- **Reviewer of Conferences**
 - IEEE International Conference on Robotics and Automation (ICRA 2020, 2021)
 - IEEE International Conference on Intelligent Robot and Systems (IROS 2020)
 - IEEE International Conference on Robotics and Biomimetics (ROBIO 2019,2018)
 - IEEE Conference on Information and Automation (ICIA 2018,2017,2016)
 - IEEE Conference on Automation and Science Engineering (CASE 2018)
 - IEEE Conference on Advanced Robotics (ICAR 2017)
- **Teaching Assistant at CUHK**
 - BMEG4103: Biomedical Modeling. Fall 2015-2016
 - BMEG3420: Medical Robotics. Spring 2016-2017
 - Develop a new course integrating robot and vision. Fall 2016-2017
 - Special TA: Interview, Photographer and General Affairs. Spring 2017-2018
 - ENGG1100: Engineering Design. Spring 2018-2019

Skills

- **Programming skills:** C/C++, MATLAB, Python, LaTeX.
- **Robot Frameworks:** ROS, Gazebo, MoveIt.
- **Tools:** Linux Shell, Visual Studio, OpenFrameworks.
- **Sports:** Basketball, Table Tennis.