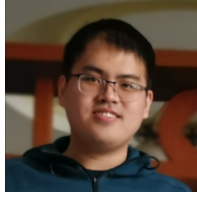


WEI WANG



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☎ (+86) 156-5077-2089

🔗 Magic-wei

🔗 magic-wei

🏠 Beijing, China

C++

Python

Linux

ROS

V-REP

🎓 EDUCATION

Beijing Institute of Technology (BIT), Beijing, China

2015 – Present

Ph.D. in Mechanical Engineering, expected June 2021

Advisors: Prof. Huiyan Chen

Harbin Institute of Technology at Weihai (HIT at Weihai), Weihai, China

2011 – 2015

B.S. in Automobile Engineering

GPA: 3.53/4 **RANK:** 9/135

⚓ RESEARCH INTERESTS

- MPC-based Motion Planning and Control
- Learning-based Control algorithms
- Unified Framework for Adaptive Motion Control

👥 EXPERIENCE

Path Tracking Algorithms Review and Verification

Oct. 2018 – Dec. 2018

Sponsor, Leader

Brief introduction:

- Developed new framework for motion control algorithms based on ROS for better developing and verifying, which unified the interfaces used in real vehicle platforms and V-REP simulation platforms
- Led a group of four beginner-level members to review papers and implement some useful algorithms which are verified in V-REP and LandCruiser unmanned ground vehicle

Unmanned Ground Vehicle Challenge 2018

Nov. 2017 – Sep. 2018

Core Leader

Brief introduction:

- Led a group of nine to redesign x-by-wire actuators for throttle and braking and develop motion control algorithms for LandCruiser unmanned ground vehicle
- Co-developed and verified kinematic and dynamic-based MPC path tracking controller
- Constructed motion control framework based on ROS and migrated motion control algorithms from RCS to ROS
- Developed a kinematic-based MPC path tracking algorithm in Frenet frame with delayed control

Autonomous Minibus Demonstration

Oct. 2017 – Dec. 2017

Core Member

Brief introduction:

- Verified and improved path tracking algorithms for minibuses trial operation in Shenzhen, China.

4D/RCS Framework Development

Dec. 2016 – May. 2017

participant

Brief introduction:

- Migrated path tracking algorithms to RCS framework

Unmanned Ground Vehicle Challenge 2016

Jun. 2016 – Sep. 2016

Core Member

Brief introduction:

- Designed, implemented and refined automatic shifting mechanisms and automatic steering mechanisms for two unmanned ground vehicles, which have been used since then
- Cooperated with two other members to be responsible for hardware maintenance of two unmanned ground vehicles

⚙ SKILLS

- **Programming Languages:** C++ > Matlab = Python > Bash > Cmake = Lua ...
- **Platform:** Linux, Windows
- **Tools:** ROS, V-REP, Clion, CarSim, RCS ...
- **Development:** Perform the test-driven development work-flow with code reviews while following the Google C++ Style guide and the typical git work-flow.

♡ HONORS AND AWARDS

- | | |
|---|------|
| • Second-class Academic Scholarship for Ph.D. student, BIT | 2018 |
| • Part of BIT team that won the third place in Unmanned Ground Vehicle Challenge 2018 | 2018 |
| • First-class Academic Scholarship for Ph.D. student, BIT | 2017 |
| • First-class Academic Scholarship for Master Student, BIT | 2016 |
| • First-class Academic Scholarship for Master Student, BIT | 2015 |
| • Third-class Academic Scholarship for B.S. student, HIT at Weihai | 2014 |
| • Third-class Academic Scholarship for B.S. student, HIT at Weihai | 2013 |
| • First-class Academic Scholarship for B.S. student, HIT at Weihai | 2012 |

📖 PAPERS

- 1 **Wei Wang**, Huiyan Chen, Jianhao Ma, Kai Liu and Jianwei Gong, "Path Tracking for Intelligent Vehicles in Frenet Frame with Delayed Control," Acta Armamentarii, 2018, under review. (in Chinese)