Yapeng SHI

+86-188-0462-0736 | Scholar/yapeng | shiyapeng66@163.com | linkedin.com/yapengshi | github.com/yapengshi

Education

Harbin Institute of Technology — Harbin, China
Phd in Robotics, Advisor: Mantian Li — *September. 2015 – Present*

Beijing Jiaotong University — Beijing, China
Bachelor of Mechanical Engineering — *September 2011 – July 2015*

Research Interests

I am generally interested in using Optimization, Whole-body Control and Machine Learning techniques to generate complex robot behaviors. My current research focuses on enabling legged robots to traverse complex environments, such as mammals, in a robust and agile manner.

Publications

- **Yapeng Shi**, Mantian Li, et al.: Force-controlled Compensation Scheme for PQ Valve-controlled Asymmetric Cylinder used on Hydraulic Quadruped Robots. **Journal of Bionic Engineering**, 2020.
- **Yapeng Shi**, Pengfeng Wang, Fusheng Zha, et al.: Mechanical design and force control algorithm for a robot leg with hydraulic series-elastic actuators. **International Journal of Advanced Robotic Systems**, 2020.
- **Yapeng Shi**, Pengfeng Wang, Mantian Li, et al.: Model predictive control for motion planning of quadrupedal locomotion. **IEEE International Conference on Advanced Robotics and Mechatronics**, 2019.
- Pengfeng Wang,**Yapeng Shi**, Fusheng Zha, et al.: An analytic solution for the force distribution based on Cartesian compliance models. **International Journal of Advanced Robotic Systems**, 2019.
- **Yapeng Shi**, Pengfei Wang, Xin Wang, et al.: Bio-inspired equilibrium point control scheme for quadrupedal locomotion. **IEEE Transactions on Cognitive and Developmental Systems**, 2018.
- ShuaiShuai Wang, **Yapeng Shi**, Wang Xin, et al.: State estimation for quadrupedal using linear inverted pendulum model. **IEEE International Conference on Advanced Robotics and Mechatronics**, 2017.
- **Yapeng Shi**, Changrong Cai, Wei Guo, et al.: Bio-inspired Control Framework for Legged Locomotion. **Dynamic Walking**, 2017.

Awards

- Best Conference Paper Award Finalist, 2019.
- HRG Best Advanced Robotics Paper Award, 2017.
- Best Conference Paper Award Finalist, 2017.

Experience

PhD visiting student at AIR Lab, University of Edinburgh — September 2019 – September,2020
worked with Dr. Zhibin Li — *Edinburgh, UK*

- Mainly focuse on Optimization-based Planning and Whole-body Force Control.

Research Assistant — March 2017 – October 2018
Robotics Lab, Shenzhen Academy of Aerospace Technology — *Shenzhen, China*

- Worked on Quadruped Locomotion.

Intern — June 2016 – Febrary 2017
Long-HIT Inc — *Shenzhen, China*

- Focused on Robot R&D.

Technical Skills

Programming: C/C++, Python, LaTeX
Skill: ROS, Matlab, SolidWorks