



## PROFESSIONAL REVIEWERS

**Member** of the following institutes

- Institute of Electrical and Electronics Engineers (IEEE)
- IEEE Robotics and Automation Society (IEEE-RAS)

**Peer-reviewer** of the following conferences and journals

- IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**)
- Complex & Intelligent Systems
- Industrial Robot

## PROJECT EXPERIENCES

- **Robotic Dexterous Manipulation** 09/2020-07/2021  
*To develop and apply one-arm mobile manipulator to open power-cabinet doors and task work inside, Nanjing, China*
- **Meka-Robot Manipulation** 09/2019-08/2020  
*To utilize deep learning on Meka-Robot for door-opening, Paris, France*
- **Edge Detection** 04/2019-06/2019  
*To deal with the power cabinet door-opening state recognition based on edge feature extraction, Nanjing, China*
- **High-voltage Insulator Defect Detection** 12/2018-07/2019  
*Developed a mobile vehicle that can automatically detect the defect of high-voltage insulators in live-line working, Kunming, China*
- **Bionic Robot** 01/2017-12/2017  
*Developed a bionic robot to replace manual tour inspection for power transmission lines, Nanjing*
- **Power Insulator Defect Detection** 03/2017-07/2017  
*Developed a device that can automatically detect the defect and damage in different types of power insulators, Shenzhen, China*
- **Under-actuated Machine Control** 09/2014-12/2016  
*To apply under-actuated technology to stabilize the oscillation of offshore wind turbine and solve control problems in oscillating screen machine, Nanjing, China*

## PATENTS

1 **Granted**, in **China**

1. 高丙团, **刘传德**, 谢吉华. 一种具有旋转激励的平移振荡装置的周期性轨迹控制方法 [P], 2018, **已授权**, CN201610004396.6

## PUBLICATIONS

**Journal Publications**

9. **Chuande Liu**, Chuang Yu, Bingtuan Gao, Syed Awais Ali Shah, Adriana Tapus. Towards a balancing safety against performance approach in human-robot co-manipulation for door-closing emergencies[J]. *Complex & Intelligent Systems*, 2021, DOI: [10.1007/s40747-021-00420-y](https://doi.org/10.1007/s40747-021-00420-y). (JCR:Q1/IF:5.277/SCI)
8. **Chuande Liu**, Bingtuan Gao, Chuang Yu, Adriana Tapus. Self-protective motion planning for mobile manipulators in a dynamic door-closing workspace[J]. *Industrial Robot*, 2021, 48(6): 803–811. (SCI)
7. **Chuande Liu**, Bingtuan Gao, Jianguo Zhao, and Syed Awais Ali Shah. Orbitally stabilizing control for the underactuated translational oscillator with rotational actuator system: Design and experimentation, *Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering*[J]. 2018, 233(5): 491–500.
6. Bingtuan Gao, **Chuande Liu**, and Hongtai Cheng. Virtual constraints based control design of an inclined translational oscillator with rotational actuator system, *Shock and Vibration*[J]. 2015, DOI: 10.1155/2015/769151.
5. **Chuande Liu**, Bingtuan Gao, Gongbei Zheng, Guobing Sun, Fuzzy control design of oscillating trajectory tracking for underactuated TORA, *Electric Machines and Control*[J]. 2018, 22(5):117–122.
4. Jing Xu, Bingtuan Gao, **Chuande Liu**, and Shuanglei Gao. An omnidirectional 3D sensor with line laser scanning, *Optics and Lasers in Engineering*[J]. 2016, 84: 96–104.
3. Leijie Jiang, Bingtuan Gao, **Chuande Liu**, Zhenyu Zhu. Trajectory tracking control of a 2-DOF cable-driven parallel mechanism, *Control and Decision*[J]. 2017, 34(5): 1103–1108.
2. Gongbei Zheng, Bingtuan Gao, **Chuande Liu**, Jihua Xie. Fuzzy Control Design for Periodic Dynamic Trajectory of Underactuated TORA System, *Control Engineering of China*[J]. 2019, 26(6): 1029–1034.
1. Syed Awais Ali Shah, Bingtuan Gao, Nigar Ahmed, and **Chuande Liu**. Advanced robust control techniques for the stabilization of translational oscillator with rotational actuator based barge-type OFWT, *Proceedings of the Institution of Mechanical Engineers, Part M: Journal of Engineering for the Maritime Environment*[J]. 2021, 235(2): 327–343.

#### Peer Reviewed Conference Proceedings

4. **Chuande Liu**, Jiahong He, and Bingtuan Gao, "Movement Planning and Control of an Overhead Power Transmission Line Inspection Bionic-Robot," in *Proceedings of 9th Annual International Conference on CYBER Technology in Automation, Control, and Intelligent Systems (IEEE-CYBER 2019)*, Suzhou, China, 29 July–2 Aug, 2019: 25–29.
3. Jianbao Zhu, **Chuande Liu**, Yuwei Sun, and Bingtuan Gao, "Power Cabinet Door-opening State Recognition Technology Based on Edge Feature Extraction of Monocular Vision," In: *IEEE-CYBER 2019*, Suzhou, China, 29 July–2 Aug, 2019: 1617–1620.
2. Syed Awais Ali Shah, Bingtuan Gao, Nigar Ahmed, **Chuande Liu**, and Arshad Rauf, "Disturbance Observer-Based Sliding Mode Control of TORA System for Floating Wind Turbines," In: *IEEE-CYBER 2019*, Suzhou, China, 29 July–2 Aug, 2019: 418–423.

1. Junjie Ye, Bingtuan Gao, Hao Chen, Weilun Xu, Linlin Zhong, **Chuande Liu**, "A Self-Constructed CNN Classifier for Keyhole Detection and Location," In: *2020 IEEE Sustainable Power and Energy Conference (iSPEC 2020)*, Chengdu, China, 2020: 2479–2484.

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