# LANG FANG



Male, Born in October 1985,

Doctor of Mechanical Design and Theory, Master's tutor, Associate Professor of Engineering College in Huazhong Agricultural University Research field: Designing and experiment of intelligent agricultural machinery equipment, Dynamic mechanism of interaction between the tillage and the soil

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### **EDUCATION**

7/2015 –now	Lecture/Associate Professor of Engineering College in Huazhong Agricultural
	University
9/2010 -7/2015	PH.D in Design and Theory of Mechanism (Electromechanical Product Innovation),
	China Agricultural University
9/2006 -7/2010	B.S in Mechanical Engineering and Automation, Shi He Zi University.
7/2014	Participated in ASABE/CSBE Annual International Meeting in Montreal, Quebec,
	Canada, and make a report.
11/2017	Participated in 2017 AGRITECHNICA, Hannover, Germany.
07/2019	Participated in ASABE/CSBE Annual International Meeting in Montreal, Q Boston,
	Massachusetts in the United States of America.

# **TEACHING AND RESEARCHING**

**Teaching courses:** Mainly engaged in teaching courses of agricultural mechanization and automation, hydraulic transmission and automatic control technology, engineering graphics and three-dimensional modeling, inclunding: *Agricultural Mechanics* and *Introduction to Agricultural Engineering*, *Hydraulic Transmission* and *Fundamentals of Electrical Control Technology and Programming Logic Controller, Engineering Graphics* and *Computer Graphics*.

**Research field:** Focused on the **designing and experiment of intelligent agricultural machinery equipment and the relationship between the tillage tools and the soil**. Mainly engaged in the technology and equipment of the stubble incorporation, expressing and controlling of the stubble spatial distribution in the soil. Meanwhile, researched on the lateral deep fertilization of the tea garden in hilly area, fully automatic feeling machine for water chestnuts, and shelling and separation machine for camellia oleifera.

### **RESEARCH PROJECTS**

- National Natural Science Foundation of China, Study on the resistance reduction and effect enhancement of rape stubble incorporation by the crushing-burying rotary tillage, 52175233, 2022.01-2025.12.(In charge)
- Natural Science Foundation of Hubei Province, Expressing and controlling of the rice stubble spatial distribution in the soil by crushing and tillage, 2021CFB433, 2021.10-2023.10.(In charge)
- Natural Science Foundation of Hubei Province, Study on the dynamic characteristics of cutting and crushing of feed rape stalks and the optimization theory of blades, 2018CFB343, 2018.01-2020.12. (In charge)
- Fundamental Research Funds for the Central Universities, Study on the interaction between narrow cutting blade and soil, 2662015QD010, 2015.07-2018.03.(In charge)
- Agricultural science and technology innovation Action of Hubei province, R&D on key technology and equipment for the mechanization of the main crops production of in hilly and mountainous areas, 2021-2022.(Participate)
- National key R & D plans, Equipment and technology of rape precision seeding with low loss, 2017YFD0700702, 2017.01-2020.12.(Participate)
- Hubei agriculture research system, Innovation and application of high quality and high efficiency ecological cultivation technology for the tea, 2021-2022.(Participate)
- National Natural Science Foundation, Research on interaction between soil-root composited structure and tillage tools on degraded compacted grassland, 51405493, 2015-2017 (Participate)

#### **PUBLICATIONS AND PATENTS (in resent 5 years)**

- Liang Fang, Wang De-cheng, You Yong et al.Design and experiment of root-cutter with fertilization and reseeding compound remediation machine for grassland[J]. *Journal of Jilin University (Engineering and Technology Edition)*, 2022,52(01):231-241.
- Liang Fang, Wang Yubing, Deng Weihong et al.Research status and development trend of mechanized straw returning technology. A review [J]. *INMATEH Agricultural Engineering*, 2021, 65(3): 465-475.
- LIANG Fang, MANG Lijun, GUO Zhou. Design and experiment of peeling machine for water chestnuts [J]. *Journal of Huazhong Agricultural University*, 2020, 39(4): 144-149.
- Liang Fang, Wang De-cheng, You Yong et al. The effect of dynamic parameters on the relationship between the root cutting blade and the soil in the grassland[J]. *Journal of Jilin University (Engineering and Technology Edition)*, 2019,49 (03):903-911.
- Liang Fang, Lei Qi'ao, Zheng Siyuan, et al. Design and experiment of electro-hydraulic profiling system with consistent pressure for drilling depth of furrow opener[J]. *Transactions of the Chinese Society of Agricultural Engineering (Transactions of the CSAE)*, 2019, 35(21): 1-8.

- Liang Fang, Yang Ganguang, Xu Feng. The Seeding Rate Control System Design and Experiment of the External Groove Wheel Seeder[J]. *Journal of Agricultural Mechanization Research*, 2019, 41(10): 153-157.
- Liang Fang, Wang De-cheng, You Yong et al. Design and experiment of furrowing device for Root-cutter with fertiliza -tion and reseeding in grassland[J]. *Journal of Huazhong Agricultural University*, 2018,37(01): 108-114.
- Liang Fang, Wang De-cheng, You Yong et al. The design and optimization of the edge curve of the root-cutting blade in grassland [J]. *Journal of China Agricultural University*, 2016, 21(06):100-107.
- Liang Fang, Li Yongze, Zhang Guozhong et al. The caterpillar combined harvester of water chestnuts, invention patent, NO.: ZL 201810531918, 2020-12-11.
- Liang Fang, Li Yongze, Zhang Guozhong et al. A kind of two-way vibration separation device for the caterpillar combined harvester of water chestnuts, invention patent, NO.: ZL 201810530414X, 2020-12-11.
- Liang Fang, Lei Qi'ao, Wang Shuangshuang et al. A kind of electro-hydraulic profiling system with consistent pressure for drilling depth of furrow opener utility model patent, NO.: ZL201921990668X, 2020-10-27.
- Liang Fang, Yuan Shaoning, Wang Lintao et al. A kind of rotary tillage with the ratio control system by hydraulic system, ZL201721184076X, 2018-05-01.

# AWARD AND HONORS

- 2014 got Ministry of Education Science and Technology Achievements Completed Certification with the title" Research and Application on the technology and equipment of root-cutter with fertilization and reseeding compound machine" (The fifth in all researchers, and the first in student researchers ) (Ministerial level)
- Undergraduate Innovation Thesis (Design) Award, Huazhong Agricultural University, instructor, 2022. (School level)
- 3. Excellent bachelor's degree thesis(Design) of Huazhong Agricultural University, instructor,2019. (School level)
- Undergraduate Innovation Thesis (Design) Award, Huazhong Agricultural University, instructor, 2017. (School level)