Bingbing LI

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CONTACT INFORMATION

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RESEARCH INTERESTS

Unmanned Aerial Vehicle: system modeling/real-time state estimation/classical control (PID/LQR/MPC)/path planning.
System Simulation: dynamic robot simulation.
Machine Learning: detection/reinforcement learning(in dynamic environment).

EDUCATION

Shenyang Institute of Automation (SIA), **Chinese Academy of Sciences(CAS)**
Shenyang, China — Sep 2014 – now

Ph.D candidate, **State Key Laboratory of Robotics**

- Major in Pattern Recognition and Intelligent System
- Advisor: *Prof.* Jianda Han

University of Science and Technology of China(USTC), Hefei, China Sep 2013 – Jul 2014

Visiting Student, Department of Automation, School of Information Science and Technology

Xidian University, Xi'an, China — Sep 2009 – Jul 2013

B.S., School of Electronic Engineering

- Major in Intelligence Science and Technology

RESEARCH EXPERIENCE

Visiting Student — Feb 2018 – Now

CCNY Robotics Lab, **The City College of New York**, USA
Supervisor: *Prof.* Jizhong Xiao
Projects: Smart Cane for Assistive Navigation (SCAN) to help blind persons.

Research Assistant — Nov 2016 – Dec 2017

State Key Laboratory of Robotics, **Shenyang Institute of Automation (SIA)**, China
Supervisor: *Prof.* Yuqing He, Jianda Han and Jizhong Xiao(City University of New York, CUNY)
Projects: 1. Dynamic simulation system for micro UAV platform
2. Precision airdrop system for medical supply and automated battlefield casualty support
3. Simulation and experiments on coverage path planning.

Research Assistant — Sep 2014 – Oct 2016

State Key Laboratory of Robotics, **Shenyang Institute of Automation (SIA)**, China
Supervisor: *Prof.* Juntong Qi, Dalei Song and Jianda Han
Projects: 1. Visual simulation system design for Powerer Parafoil UAV (PPUAV)
2. Development of equipment for earthquake emergency search and rescue.

Research Assistant — Jun – Aug 2012

School of Electronic Engineering, Xidian University, China
Supervisor: *Prof.* Xin Yu and Licheng Jiao
Projects: Flight path planning research based on A star method.

PREPRINTS

(* means corresponding author and *Prof.* Jianda Han is my doctoral supervisor.)

1. **Bingbing Li**, Liying Yang, Yuqing He*, Jianda Han, Jizhong Xiao., "A New Modeling Scheme for Powered Parafoil Unmanned Aerial Vehicle Platforms: Theory and Experiments," *submitted to AIAA Journal of Guidance, Control and Dynamic.* (**JGCD, SCI**)

Publications

1. **Bingbing Li**, Liying Yang, Yuqing He, Jianda Han and Jizhong Xiao, "System Identification and Control of PPUAV," *IEEE International Conference on Cyber Technology in Automation, Control and Intelligent Systems* (**CYBER**), 2017.
2. **Bingbing Li**, Juntong Qi, Tianyu Li, Sen Mei, Dalei Song and Jianda Han, "Energy-based controller decoupling of Powered Parafoil Unmanned Aerial Vehicle," *IEEE International Conference on Cyber Technology in Automation, Control and Intelligent Systems* (**CYBER**), 2016.
3. **Bingbing Li**, Juntong Qi, Tianyu Li, Sen Mei, Dalei Song and Jianda Han, "Real-Time Data Acquisition and Model Identification for Powered Parafoil UAV," *International Conference on Intelligent Robotics and Applications* (**ICIRA**), 2015.
4. **Bingbing Li**, Fan Liu, Juntong Qi, Sen Mei, Tianyu Lin and Jianda Han, "Transfer Functions Model Identification and Flight Test for Powered Parafoil UAV," *Chinese Control Conference* (**CCC**), 2015.

Competitions

1. 4^{th} International UAV Innovation Grand Prix Anji, Zhejiang, China Oct 19 – 23 2016
   Hosted by Aviation Industry Corporation of China(AVIC)
   Bingbing Li(Team Leader), Xiangdong Meng, Zhong Liu, Bo Dai, Bin Xiao, Lilong Huang
   First Prize(First Place) among 12 teams in Rotary-wing UAV groups.
2. 3^{th} International UAV Innovation Grand Prix Anji, Zhejiang, China Oct 27 – 31 2015
   Hosted by Aviation Industry Corporation of China(AVIC)
   Jun Jiang(Team Leader), **Bingbing Li**, Yu Zhou, Xiangdong Meng and Xiaoguang Zhao
   Second Prize(Third Place) among 12 teams in Rotary-wing UAV groups.

Honors and Awards

- Second Prize Scholarship of Xidian University, 2011, 2012
- Advanced Individual of Social Work, 2011
- First Prize Scholarship of Xidian University, 2010
- **National Scholarship** (Ministry of Education, China, **Top 2%**), 2010
- Advanced Individual of Civilized Dormitory Contribution, 2010
- Excellent Student in Xidian University (**Top 5%**), 2009, 2010

Professional Activities

Conference Reviewer

- IEEE International Conference on Cyber Technology in Automation, Control, and Intelligent Systems (CYBER), Hawaii, USA Jul 2017
- IEEE IEEE International Workshop on Advanced Robotics and its Social Impacts (ARSO), Shanghai, China Jul 2016
- IEEE International Conference on Robotics and Automation (ICRA), Stockholm, Sweden. May 2016
- IEEE International Conference on Cyber Technology in Automation, Control, and Intelligent Systems (CYBER), Shenyang, China Jun 2015

Oral Presentations or Posters at Conferences

- IEEE International Conference on Cyber Technology in Automation, Control, and Intelligent Systems (CYBER), Chengdu, China Jun 2016
- Chinese Control Conference (CCC), Hangzhou, China Jul 2015

Teaching

- Teaching Assistant, Autonomous Control of UAV, Shenyang Institute of Automation Fall 2014, 2015

Skills

- Programming: Matlab, C/C++, Python, Linux, LaTeX, Visual Studio Code, Android Studio, Eclipse, Sublime.
- UAV control and simulation tools: Pixhawk, ROS, MAVROS, Gazebo, VREP, Flightgear.
- Machine learning tools: Keras, Tensorflow Mobile, TensorFlow.
- Machine learning tools(in study): Gym(OpenAI), Universe(OpenAI).