Yao Su

Email: suyao@biga.ai | yaosu@g.ucla.edu
Telephone: (+86)15710929261

RESEARCH INTERESTS

Robotics，Control and System，Optimization，Path Planning，Dynamics，Simulation

EDUCATION

University of California, Los Angeles **Los Angeles, CA**

Ph.D. in Mechanical Engineering 09/2017-06/2021

M.S. in Mechanical Engineering 09/2016-06/2017

Overall GPA: 3.87/4.0

Harbin Institute of Technology **Harbin, China**

B.S in Mechanical Engineering and Automation 09/2012-06/2016

Overall GPA: 3.83/4.0 **Major GPA: 3.92/4.0**

APPOINTMENTS

Beijing Institute for General Artificial Intelligence(BIGAI)
Research Scientist in Robotics 06/2021–Present

Mechatronics and Control Laboratory(MacLab)
Graduate Student Researcher, Advisor: Dr.Tsu-Chin Tsao 09/2017–06/2021

Robotics and Mechanisms Laboratory(RoMeLa)
Graduate Student Researcher, Advisor: Dr.Dennis Hong 09/2016–09/2017

PUBLICATIONS

Journal Paper (*indicates joint first authors)

[J5] **Su, Y.*,** Ruan. L.*, Yu, P.*, Gerber, M. J., & Tsao, T. C. (2021). “A Fast and Efficient Attitude Control Algorithm of the Tiltable Actuator Aerial Platform Using Inputs Redundancies,” IEEE Robotics and Automation Letters (accepted).

[J4] **Su, Y.***, Yu, P.*, Gerber, M. J., Ruan, L., & Tsao, T. C. (2021). “Nullspace-Based Control Allocation of Overactuated UAV Platforms,” IEEE Robotics and Automation Letters, 6(4), 8094-8101. DOI: 10.1109/LRA.2021.3095035

[J3] Yu, P.*, **Su, Y.***, Gerber, M. J., Ruan, L., & Tsao, T. C. (2021). “An Over-Actuated Multi-Rotor Aerial Vehicle With Unconstrained Attitude Angles and High Thrust Efficiencies,” IEEE Robotics and Automation Letters, 6(4), 6828-6835. DOI: 10.1109/LRA.2021.3095035

[J2] Luo, J., Gong, Z., **Su, Y.**, Ruan, L., Zhao, Y., Asada, H. H., & Fu, C. (2021). “Modeling and Balance Control of Supernumerary Robotic Limb for Overhead Tasks,” IEEE Robotics and Automation Letters, 6(2), 4125-4132. DOI: 10.1109/LRA.2021.3067850

[J1] Luo, J., **Su, Y**., Ruan, L., Zhao, Y., Kim, D., Sentis, L., & Fu, C. (2019). “Robust Bipedal Locomotion Based on a Hierarchical Control Structure,” Robotica, 37(10), 1750-1767. DOI: 10.1017/S0263574719000237

Conference Paper (*indicates joint first authors)

[C3] Pi, C., Ruan, L., Yu, P., **Su, Y.**, Cheng, S., & Tsao, T. (2021). A simple six degree-of-freedom aerial vehicle built on quadcopters. In 2021 IEEE Conference on Control Technology and Applications (CCTA).

[C2] Wang, M., **Su, Y.**, Liu, H., & Xu, Y. (2020). WalkingBot: Modular Interactive Legged Robot with Automated Structure Sensing and Motion Planning. In 2020 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN) (pp. 307-312). IEEE.

[C1] Lin, X., Krishnan, H., **Su, Y.**, & Hong, D. W. (2018,). Multi-limbed robot vertical two wall climbing based on static indeterminacy modeling and feasibility region analysis. In 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) (pp. 4355-4362). IEEE.

INTERNSHIP

Robotics Engineer at DMAI, Los Angeles, CA 90024 01/2018-04/2020

PERSONAL EXPERIENCE

- Recommended for admission to Harbin Institute of Technology (HIT) without examination 03/2009
- First Prize of National Olympiad in Informatics in Provinces, Hebei，China 11/2008
- Second Prize of National Olympiad in Informatics in Provinces, Hebei，China 11/2007

HONORS AND AWARDS

- The Excellent Graduate of HIT (3%)
- The Second Prize of Summer Social Practice in HIT
- Merit Students for three times (6%)
- The First Prize Scholarship of “Accompanying Grows” (3%)
- People’s Scholarship for eight times (3%)
- The Third-class scholarship of SMC (8%)

SKILLS

- **Programming**: Pascal, C, C++, VB, Python, Rasberry Pi, Arduino
- **Simulation Tool**: ROS/Gazebo, V-rep, Openai Gym/Mujoco
- **Software**: MATLAB/Simulink, LabVIEW
- **CAD**: AutoCAD, SolidWorks

PERSONAL SERVICE

Journal Reviewer: Robotica, IEEE RA-L