Rui Zhang

Ph.D. Candidate, Department of MAE, CUHK

Email : rzhang@mae.cuhk.edu.hk
Homepage: ruizhangcc.github.io

Education

- **The Chinese University of Hong Kong (CUHK)** — Aug. 2020 –
  Doctor of Philosophy in Mechanical and Automation Engineering (MAE); GPA: 3.74/4 — *Advisor: Jie Huang*
- **Beijing University of Aeronautics and Astronautics (BUAA)** — Sep. 2017 – Jan. 2020
  Master of Engineering in Aerospace Science and Technology; GPA: 3.65/4 — *Advisor: Chao Han*
- **Beijing University of Aeronautics and Astronautics** — Aug. 2013 – Jul. 2017
  Bachelor of Engineering in Flight Vehicle Design and Engineering; GPA: 3.70/4 — *Advisor: Chao Han*

Research Interests

Multi-agent systems, Nonlinear control, Output regulation, Adaptive control, Robot manipulator control, Spacecraft guidance, navigation, and control

Honors and Awards

- Vice-Chancellor's Ph.D. Scholarship from CUHK *2020*
- Excellent Academic Paper Award from BUAA *2019 & 2020*
- Top Ten Postgraduate Student Award (<1%) from BUAA *2019*
- China National Scholarship (<1%) from BUAA *2018*
- First-class Academic Scholarship from BUAA *2017, 2018 & 2019*
- Postgraduate Freshmen Scholarship from BUAA *2017*
- Distinguished Graduate Award of Beijing *2017 & 2020*
- Meritorious Winner of COMAP's Mathematical Contest in Modeling (MCM) *2016*

Publications

Journal Papers

[1] Rui Zhang and Jie Huang, "Fully event-triggered practical leader-following consensus of multiple Euler-Lagrange systems over switching networks," *IEEE Transactions on Cybernetics*, under review.

[2] Rui Zhang and Jie Huang, "Event-triggered output-based distributed observer over jointly connected networks and its application to the cooperative output regulation problem," *IEEE Transactions on Neural Networks and Learning Systems*, under review.

[3] Rui Zhang and Jie Huang, "Event-triggered output-based adaptive distributed observer over jointly connected networks and its application," *Nonlinear Analysis: Hybrid Systems*, 50: 101415, 2023.

[4] Rui Zhang, Chao Han, Xiucong Sun, and Zheng Qi, "Initial orbit determination from atmospheric drag direction," *Journal of Guidance, Control, and Dynamics*, 42(12): 2731-2740, 2019.

[5] Rui Zhang, Yuanjin Yu, Chao Han, and Zhaohua Yang, "An anti-saturation steering law for Three Dimensional Magnetically Suspended Wheel cluster with angle constraint," *Acta Astronautica*, 151: 467-474, 2018.

Conference Papers

[1] Rui Zhang, Fei Xu, Chao Han, and Xiucong Sun, "Low-earth orbit determination based on atmospheric drag measurements," *2018 AAS/AIAA Astrodynamics Specialist Conference*, Snowbird, Utah, Aug. 19-23, 2018.

[2] Rui Zhang, Ran Zhang, and Chao Han, "Analysis of fuel-optimal orbital transfer to geosynchronous orbit using electric propulsion," *4th IAA/AAS Conference on Dynamics, Control and Space Systems*, Changsha, Hunan, China, May. 21-23, 2018.

Patents

[1] Xiucong Sun and Rui Zhang, "A low-earth orbit determination method based on atmospheric drag acceleration measurement," *China Patent CN108548542A*.

Teaching Experiences

- Teaching Assistant for MAEG3050 at CUHK: Introduction on Control Systems *2021-2022*
- Teaching Assistant for ENGG1130 at CUHK: Multivariable Calculus for Engineering *2021-2023*
- Teaching Assistant for Orbital Dynamics at BUAA *2019*

Academic Services

- Reviewer of IFAC World Conference

Skills

- **Languages**: English (Fluent, IELTS 6.5), Chinese (Fluent)
- **Programming Languages**: C/C++, Python, Matlab/Simulink
- **Softwares**: PyCharm, SourceTree, Latex, Adobe Illustrator