

# Rui Zhang

Ph.D. Candidate, Department of MAE, CUHK

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## Education

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- **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

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

## Honors and Awards

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- 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

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### 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

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- 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

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- Reviewer of IFAC World Conference

## Skills

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