

# Rui Zhang

Postdoctoral Researcher, MAE, CUHK

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## Education

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- **The Chinese University of Hong Kong (CUHK)** Aug. 2020 – Jul. 2024  
*Doctor of Philosophy in Mechanical and Automation Engineering (MAE); GPA: 3.73/4* Advisor: [Jie Huang](#)
- **Beihang University (BUAA)** Sep. 2017 – Jan. 2020  
*Master of Engineering in Aerospace Science and Technology; GPA: 3.65/4* Advisor: *Chao Han*
- **Beihang University** 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, Distributed Control, Spacecraft Guidance, Navigation, and Control

## Honors and Awards

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- Vice-Chancellor's Ph.D. Scholarship (<1%) 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*, accepted.
- [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," *Neurocomputing*, 599: 128072, 2024.
- [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

- [6] [Rui Zhang](#) and [Jie Huang](#), "Fully event-triggered cooperative linear output regulation over jointly connected switching networks," *8th International Conference on Control, Automation and Diagnosis*, Paris, France, May. 15-17, 2024.
- [7] [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, USA, Aug. 19-23, 2018.

- [8] 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

- [9] 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
- Reviewer of International Conference on Control, Automation and Diagnosis (ICCAD)

## Skills & Hobbies

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- **Languages:** English (Fluent, IELTS 6.5), Chinese (Native)
- **Programming Languages:** C/C++, Python, Matlab/Simulink, LaTeX
- **Softwares:** PyCharm, SourceTree, Adobe Illustrator, STK, AutoCAD, Solidworks
- **Hobbies:** Kayaking, hiking, badminton, running, photography, violin