Zirui Chen, Ph.D. Student

✉ chenzirui@westlake.edu.cn
🌐 https://czr-gif.github.io/

Education

2024 – Present 🔖 **Ph.D, Westlake University** Intelligent Unmanned System Laboratory
Mentor: Prof. Shiyu Zhao
Tentative Thesis title: *Data-Driven Control and Reinforcement Learning for Nonlinear Robotic Systems*

2021 – 2024 🔖 **M.Eng., Beihang University**, The Seventh Devision
Mentor: Prof. Zongyu Zuo
Thesis title: *Nonsingular Guiding Vector Field for Geometric Path Following Control.*

2017 – 2021 🔖 **B.Eng., Beihang University**, School of Automation Science and Electrical Engineering
Thesis title: *Path Following Control for Airship.*

Research Publications

1. Z. Chen, J. Tang, and Z. Zuo, "A novel prescribed-performance path-following problem for non-holonomic vehicles," en, *IEEE/CAA Journal of Automatica Sinica*, vol. 11, no. 6, pp. 1476–1484, Jun. 2024_06. 🔗 DOI: 10.1109/jas.2024.124311.

2. Z. Chen and Z. Zuo, "Non-singular cooperative guiding vector field under a homotopy equivalence transformation," en, *Automatica*, vol. 171, p. 111 962, Jan. 2025_01. 🔗 DOI: 10.1016/j.automatica.2024.111962.

Skills

Programming 🔖 Python, MATLAB/Simulink, LaTeX, Git.

Robotics & Control 🔖 Nonlinear control design, model predictive control (MPC), reinforcement learning, optimal control, trajectory planning and tracking.

Languages 🔖 Native in Mandarin Chinese; fluent in English (IELTS 6.5).

Miscellaneous Experience

Teaching Experience

2021 🔖 **Best Teaching Assistant Award**, Beihang College, Beihang University.

Academic Service

Since 2024 🔖 Reviewer for Automatica, IEEE Transactions on Industrial Informatics (TII), and Journal of the Astronautical Sciences (JAS).