

Jiayu Wu
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Research Interests

Geometric Modeling Computer-aided Design Computer Graphics Computational Geometry Parallel Computing

Education

2023–present **M.S.** in Artificial Intelligence, Zhejiang University, Weighted Average(91.8/100)
Rank(NA^{*})
2019–2023 **B.Sc.** in Software Engineering, Dalian University of Technology, Weighted Average(92.1/100) Rank(2/73) (**Top%3**)

Research Experience

2023–present Graduate Student, [State Key Laboratory of CAD&CG](#), Zhejiang University, (Advisor: [Prof. Qiang Zou](#))
Research Topic 1: **High-performance B-spline modeling on GPU (Main Focus)**
Research Topic 2: **Using generative models for curve and surface modeling**

Selected Publications

Journal Articles

- J1. **Jiayu Wu**, Feng, Z. & Zou, Q. Matrix representation and GPU-optimized parallel B-spline computing. *Computer-Aided Design (presented in SPM2025)* **189**, 103948 (2025).
- J2. Zou, Q., Zhu, L., **Jiayu Wu** & Yang, Z. SplineGen: Approximating unorganized points through generative AI. *Computer-Aided Design* **178**, 103809 (2025).
- J3. Zhao, Y., Zou, Q., Luo, G., **Jiayu Wu**, Chen, S., Gao, D., Xuan, M. & Wang, F. TPMS2STEP: Error-Controlled and C2 Continuity-Preserving Translation of TPMS Models to STEP Files Based on Constrained-PIA. *Computer-Aided Design* **173**, 103726 (2024).

Working papers

- W1. **Jiayu Wu** & Zou, Q. *Efficient B-spline surface intersection on GPUs* Manuscript in preparation. 2026.

*Due to different course selections, the College of Computer Science where I am located does not provide grade rankings for graduate students. In the academic year's class average statistics, I was 1/33 in my administrative class.

Presentations

Talks

- T1. **Jiayu Wu.** *High performance geometric computing* SPM 2025: Symposium on Solid and Physical Modeling (Hangzhou, China). Oct. 2025.

Awards & Honors

Awards and Achievements

- 2020, 2021 **Gold Award**, Liaoning Provincial Programming Contest.
2020 **Bronze Award**, CCPC Undergraduate Programming Competition (Northeast China).
2020 **Silver Award**, National College Student Algorithm Programming and Design Contest.
2021 **Winning Prize**, 2021 ACM-ICPC Asia Regional Finals (ICPC EC-final).
2021 **Individual Second Prize**, CCCC National Group Programming Ladder Competition.

Scholarship

- 2020, 2021 **First-class scholarship for study**. Dalian University of Technology.
2020–2022 **Science and Technology Innovation Scholarship**. Dalian University of Technology.
2020 **National Scholarship (Undergraduate Level) (Top%1)**. Ministry of Education of the People's Republic of China.
2024, 2025 **First-class Scholarship for Academic Excellence**. Zhejiang University.
2025 **National Scholarship (Graduate Level) (Top%1)**. Ministry of Education of the People's Republic of China.

Honors

- 2023 **Outstanding Graduate**. Dalian University of Technology.
2024 **Academic Innovation Ability Single Honor**. Zhejiang University.
2025 **Outstanding Postgraduate**. Zhejiang University.
2025 **Five-Good Postgraduate**. Zhejiang University.

Skills

- Languages** Chinese (native); English (TOEFL iBT 104); Japanese (JLPT N2, score 132)
Programming C/C++; CUDA; Python

Last updated: November 27, 2025