

JIAQI WU

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Education

Tsinghua University, Department of Computer Science and Technology

Sep. 2022 – Present

Senior Undergraduate, Computer Science and Technology

GPA: 3.98/4.0; 104 credits with grades of A or above

Ranking: 3/201

Research Interests

Computer Graphics, Computer Vision, Rendering Techniques

Publications

- Gradient Domain Reconstruction for Monte Carlo PDE Solvers
Jiaqi Wu, Xuejun Hu, Shuang Zhao, Kun Xu
ACM Transactions on Graphics (SIGGRAPH 2026)
- Generalized Spherical Harmonics Products using Spherical Grids
Di An, **Jiaqi Wu**, Bowen Xu, Lingqi Yan, Kun Xu
ACM Transactions on Graphics (SIGGRAPH 2026)
- Adding Regional Control for Continuous Remeshing via Attention Flows
Jiaqi Wu, Kun Xu
SIGGRAPH 2025 Poster

Research Experience

The 5th Jittor AI Algorithm Challenge

Beijing, China

Team Leader and First Author

May 2025 – Present

▶ **Human Skeleton Generation Track**

- Led the team and ranked first on both the public and private leaderboards; received the First Prize and was invited to submit a CVMJ Short Communication. The related work is being prepared for submission to a top international journal or conference.
- Extracted features using a PCT network and trained a decoder to regress skinning weights for each vertex, producing stable weight fields.
- First introduced predicted skinning weights as conditional input to the joint-position prediction head, improving robustness and generalization under limited training data.

Beijing Undergraduate Research Program

Beijing, China

Project Leader

May 2025 – Present

▶ **Efficient PDE Solving Framework Based on Grid-free Monte Carlo and Sample Reuse**

- Initiated the project and received the highest level of funding; developed an efficient PDE solving framework based on grid-free Monte Carlo methods and sample reuse.
- Optimized algorithms to improve the efficiency of partial differential equation solvers for complex physical simulation scenarios.

Tencent Spark Program – Supernova Project

China

First Author

Apr. 2024 – Jun. 2025

▶ **Adding Regional Control for Continuous Remeshing via Attention Flows**

- Published the work as a SIGGRAPH Poster as the first author; filed one related patent application.
- Developed an attention-flow-based method for regional control in continuous remeshing; **won the Third Prize in the Information Technology Track of the 43rd Tsinghua Challenge Cup.**

Huawei HarmonyOS Pipeline AI Rendering Project

China

Developer

Aug. 2024 – Jun. 2025

▶ **Accelerated Rendering via AI-based Indirect Illumination Prediction**

- Participated in dataset processing, on-device deployment, and methodological improvement; used AI models to predict indirect illumination for accelerated rendering.
- Optimized the rendering pipeline to improve real-time rendering performance.

Internship Experience

Huawei

Research Intern

- Studied sparse volumetric voxel rasterization and compared it with 3D Gaussian Splatting.

Beijing, China

Jun. 2025 – Aug. 2025

Tencent

Research Intern, Durer Group

- Developed an attention-flow-based method for regional control in continuous remeshing.

Beijing, China

Jun. 2024 – Oct. 2024

Scholarships and Honors

National Scholarship

Sep. 2025

National Scholarship

Sep. 2024

Tang Zhongying Moral Education Scholarship

May 2024

Tsinghua University Comprehensive Scholarship: Friends of Tsinghua – PetroChina Scholarship

Sep. 2023

Tang Zhongying Moral Education Scholarship

Jun. 2023

Technical Skills

Programming and Tools: Python, C++, PyTorch

Research Areas: Computer Graphics, Computer Vision, Rendering Techniques

Languages: English (CET-4: 636; proficient in reading English academic papers), Chinese (Native)

Other Skills: Teamwork, Project Management, Sports (Long-distance Running, Table Tennis, Swimming)