

Tianxiao Li

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School of Software | Tsinghua University | Beijing, China

Education

Tsinghua University, School of Software

Beijing, CN

B.E. in Software Engineering

Aug. 2023 – Expected 2027

GPA: 4.0/4.0, Rank: 1/78

Relevant Courses:

Advanced Topics in Linear Algebra (A+)

Calculus A(2) (A+)

Introduction to Complex Analysis (A+)

Discrete Mathematics(2) (A+)

Probability and Statistics (A)

Introduction to Algorithms (A+)

Physics for Scientists and Engineers (A)

Machine Learning (A)

Data Structure (A)

Research Interests

Computer Graphics and 3D Vision, particularly inverse rendering, 3D representations and generation, and physically grounded learning.

Publications

- **Tianxiao Li***, Tianyu Huang*, Hang Zhou, Yuezhou Ma, Minghao Guo, Haixu Wu[†], Chuang Gan, Mingsheng Long, Wojciech Matusik, “FlowPDE: Understanding and Justifying Flow Matching in PDE Solving.” in *ICML 2026 Workshop on AI for Physics*, 2026.
- Yiheng Zhang, Zhe Zhu, Tingrui Shen, Zhuojiang Cai, **Tianxiao Li**, Zixing Zhao, Qiujie Dong, Zhiyang Dou, Jiepeng Wang, Le Wan, Yuwang Wang, Wenping Wang, Yuan Liu[†], Cheng Lin[†], “QuadLink: Autoregressive Quad-Dominant Mesh Generation via Point-Relation Learning.” preprint. [\[Paper\]](#)
- Yuxuan Han, Xin Ming, **Tianxiao Li**, Zhuofan Shen, Qixuan Zhang, Lan Xu, Feng Xu[†], “Learning a Delighting Prior for Facial Appearance Capture in the Wild.” in *ACM Transactions on Graphics (Proc. of SIGGRAPH)*, 2026. [\[Project\]](#)
- Yuxuan Han, Xin Ming, **Tianxiao Li**, Zhuofan Shen, Qixuan Zhang, Lan Xu, Feng Xu[†], “WildCap: Facial Albedo Capture in the Wild via Hybrid Inverse Rendering.” in *The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2026. [\[Project\]](#)
- Yiheng Zhang*, Zhuojiang Cai*, Mingdao Wang*, Meitong Guo, **Tianxiao Li**, Li Lin, Yuwang Wang[†], “M3DLayout: A Multi-Source Dataset of 3D Indoor Layouts and Structured Descriptions for 3D Generation.” in *The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2026. **(Highlight)** [\[Project\]](#)

* Equal contribution; [†] Corresponding author.

Research Experience

- **Research Intern** Jun. 2026 – Present
Siebel School of Computing and Data Science, University of Illinois Urbana-Champaign (UIUC)
Advisor: Prof. Shuang Zhao
Researching physics-aware 3D reconstruction from motion-degraded imagery by combining physically based forward models with learned image priors.
- **Remote Research Intern** Jan. 2026 – Jun. 2026
The Computational Design and Fabrication Group (CDFG),
Computer Science and Artificial Intelligence Laboratory (CSAIL), Massachusetts Institute of Technology (MIT)
Advisor: Prof. Wojciech Matusik
Studied Flow Matching for neural PDE solving, connecting generative flows with classical numerical solvers and developing FlowPDE.
- **Remote Research Intern** Sept. 2025 – Jan. 2026
Intelligent Graphics Lab, Hong Kong University of Science and Technology
Advisor: Prof. Yuan Liu and Prof. Wenping Wang
Worked on QuadLink, a generative framework for production-ready quad-dominant meshes with structured topology and coherent edge flow.
- **Research Intern** Mar. 2025 – Present
Institute of CG and CAD, Tsinghua University
Advisor: Prof. Feng Xu
Researched in-the-wild facial appearance capture by combining learned delighting priors with model-based inverse rendering.

- **Research Intern**
Metaverse AI Interdisciplinary Innovation Lab, Tsinghua University
Advisor: Prof. Yuwang Wang and Prof. Qionghai Dai
Explored 3D scene generation, light-field rendering, and immersive displays, including M3DLayout and OptiX-based light-field synthesis.
- Apr. 2024 – Nov. 2025

Honors and Research Funding

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| • National Scholarship, awarded twice | 2024 & 2025 |
| • SenseTime Scholarship (top 30 undergraduates nationwide) | 2026 |
| • Natural Science Foundation of Beijing, Undergraduate Research Project, Principal Investigator | 2026 |
| • Tan Haoqiang Computer Education Fund Outstanding Student Award | 2026 |
| • Spark Scientific and Technological Innovation Fellowship, Tsinghua University | 2026 |
| • First Prize, Software Design Competition of Tsinghua University | 2026 |
| • Second Prize for Oral Presentation and Outstanding Poster Award, Tsinghua University Student Academic Research Advancement Program | 2025 |
| • Third Prize, 43rd Tsinghua University “Challenge Cup” Student Academic Science and Technology Competition | 2025 |
| • Second Prize, Most Creative Award, and Most Popular Award, 1st “Zhili Cup” Agent Competition | 2024 |

Skills

Languages: TOEFL 5.0/6.0, CET-6 612
Programming: C/C++, Python, C#, PyTorch, OpenCV
Research & Tools: Unreal Engine, Unity, NVIDIA OptiX, Qt, Django, Git, LaTeX

Academic Service and Leadership

Academic Service

- Reviewer, Pacific Graphics 2026
- Reviewer, ICML 2026 Workshop on AI for Physics
- Student Volunteer, China3DV 2025

Teaching & Technical Leadership

- President, Student Association for Science and Technology, School of Software, Tsinghua University
- Deputy Secretary-General, Peer Tutoring Center, School of Software, Tsinghua University
- Deputy Director, Competition and Research Department, Tsinghua University Student Algorithm Association